

**California Bay-Delta
Public Advisory Committee
Public Meeting**

**Thursday, September 11, 2003
9:00 a.m. – 4:00 p.m.**

**California Bay-Delta Authority
Bay-Delta Room
650 Capitol Mall, Fifth Floor
Sacramento, California**

Date: August 29, 2003

To: California Bay-Delta Public Advisory Committee

From: Patrick Wright
Director

Subject: September 11, 2003 Meeting

The upcoming meeting of the California Bay-Delta Public Advisory Committee will be held on Thursday, September 11, 2003, in Sacramento, California. The meeting will be at the Bay-Delta Authority offices at 650 Capitol Mall, Fifth Floor, in the Bay-Delta Room (see attached maps). Major outcomes for the meeting are expected to be:

- Adopt and forward to the California Bay-Delta Authority and implementing agencies the Drinking Water Subcommittee recommendation on a Drinking Water Policy framework.
- Review Year 1-3 accomplishments and performance, along with the budgets for Years 1 through 4.
- Identify priorities and future funding needs for a report to the California Bay-Delta Authority and implementing agencies.
- Report to the Authority and implementing agencies on coordination needs between the California Water Plan Update, Federal Water 2025 and the California Bay-Delta Program processes, processes or tools needed for making critical water management decisions in the next few years, and issues related to integrated regional water management planning.
- Discuss the strategy and process for the Long-Term Finance Plan.

The meeting agenda and materials are attached. Please note the amended Federal charter for the Committee (agenda item 2). The charter was signed by Secretary of the Interior Gale Norton and filed on August 15, 2003. The charter is effective until August 15, 2005; we anticipate that it to be renewed again, as the Committee is expected to exist until the end of Stage 1. We have also enclosed the latest "Science In Action" for your information.

I look forward to meeting with you.

August 28, 2003

California Bay-Delta Public Advisory Committee
Thursday, September 11, 2003
9:00 a.m. to 4:00 p.m.
California Bay-Delta Authority
Bay-Delta Room
650 Capitol Mall, Fifth Floor
Sacramento, California

Agenda¹

- 9:00 a.m.
1. Opening Remarks/Introductions
 2. Staff Reports
 3. Subcommittee Reports
 - Drinking Water Policy Framework Recommendation (*Action Item*)
 4. Bay-Delta Program Plans Follow-Up (*Action Item*)
 5. Year 3 Progress towards Balanced Implementation
 - Year 3 Accomplishments
 - Years 1-3 Funding
 - Year 4 Program-Wide Priorities and Schedule
 - Year 4-6 Budget & Finances
 6. Finance Plan Status Update
 7. California Water Plan Update, Water 2025 and the Bay-Delta Program (*Action Item*)
Public Comment
 8. Lunch Topic: Year 3 Progress towards Balanced Implementation, (Agenda Item 5 Continued)
 - Bay-Delta Program Regional Overviews
 - Delta Presentation
 9. Year 3 Progress towards Balanced Implementation (Agenda Item 5 Continued) (*Action Item*)
 - State and Regional Priorities
Public Comment
- 4:00 p.m. Adjourn

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- If you have any questions or need additional information, please contact Eugenia Laychak at (916) 445-5511. Visit our website at <http://calwater.ca.gov>.
 - Meeting packets available upon request. Please contact Pat Rogers at (916) 445-5511.
 - If you have questions or need reasonable accommodation due to a disability, please contact Pauline Nevins at (916) 445-5511, TDD (800) 735-2929.

¹ Order of agenda items is subject to change.

Agenda Item 2
Staff Reports

United States Department of the Interior
Bureau of Reclamation
California Bay-Delta Public Advisory Committee
CHARTER

To obtain a copy of the charter, please call the
California Bay-Delta Authority office at (916) 445-5511

California Bay-Delta Public Advisory Committee

Meeting Date: 9/11/03
Agenda Item: 3

Drinking Water Subcommittee Recommendation

Description:	Drinking Water Policy Framework for Bay-Delta Program projects and actions.
Recommended Action:	Committee adopt and forward recommendations to the California Bay-Delta Authority and implementing agencies.

Subcommittee Recommendation

The Drinking Water Subcommittee requests the Committee and implementing agencies to adopt and send to the California Bay-Delta Authority a policy based on the framework discussed below, for assuring continuous improvement in drinking water quality as Bay-Delta projects and actions are developed.

Background

The Drinking Water Subcommittee has developed a recommendation for a Policy Framework on drinking water quality as it relates to Bay-Delta Program Projects and Actions. This was introduced to the BDPAC on September 19, 2002, and discussed at the Steering Committee in November 2002, and again at the BDPAC meeting of June 5, 2003; it has also been discussed with the Water Supply Subcommittee and in a joint meeting with the Drinking Water Subcommittee and the Ecosystem Restoration Subcommittee. It is being brought to the BDPAC for adoption as a formal recommendation to the California Bay-Delta Authority.

A Bay-Delta Program commitment is to achieve a continuous improvement in Delta water quality for all beneficial uses. As projects and actions move forward under the Bay-Delta Program, it will be necessary, as part of the environmental documentation and planning processes, to identify project or action impacts or benefits to water quality. While some projects or actions may degrade drinking water quality, others have the potential to improve conditions in this regard. The overall Bay-Delta Program should result in an improvement.

This policy framework is intended to guide Bay-Delta Program planning and implementation to ensure the Program target of continuously improving Delta water quality for all uses are achieved. The policy framework is not intended to change or replace the existing legal requirements under CEQA and NEPA for review and identification of project impacts and mitigation for significant impacts, nor is it intended to place hindrances or burdensome requirements on actions or projects that are being implemented. Rather, it provides the framework for dealing with water quality impacts of actions and projects that make important contributions to the Bay-Delta Program in a positive way. The policy framework is consistent with the CALFED EIR/EIS, which discusses at length potential impacts to water quality from projects in other program elements (Chapter 5.3). An eventual policy based on this framework should be used to help develop linkages and priorities in the water quality strategic plan.

The purpose of this policy framework is to guide the implementation strategy of the Bay-Delta Program as projects and actions are implemented. In some instances, it will be found that projects and actions under the Program will adversely affect water quality while providing benefits in other important areas. In some cases, the project or action itself may be able to provide mitigation measures to avoid or offset these impacts. In other cases, the project or action may have to rely in whole or in part on other parts of the Bay-Delta Program to ensure water quality improvement goals are met. In addition to alternatives (that would avoid impacts or result in water quality improvements) and mitigation measures (that would reduce impacts) for projects and actions, the Bay-Delta Program should consider bundling projects for implementation to ensure water quality improvement goals are met.

This policy framework was considered and discussed at the June 28, 2002, July 26, 2002, August 23, 2002, June 25, 2003, and August 22, 2003, Drinking Water Subcommittee meetings; a joint meeting of the Drinking Water Subcommittee and Ecosystem Restoration Subcommittee on April 25, 2004; the June 21, 2003, and August 21, 2003, meetings of the Water Supply Subcommittee; the BDPAC Steering Committee meeting on November 13, 2002; and the BDPAC meeting of June 5, 2003. Comments from the discussion have been incorporated into the recommendation, including comments from Bay-Delta Program agencies.

RECOMMENDED POLICY FRAMEWORK

1. *Identification of impacts:* The overarching principle of the Program is to provide improvements in key resource areas including water supply, water quality, fish and wildlife habitat, and levee protection. It is recognized that individual projects will not necessarily provide improvements in all resource areas. However, it is intended that the aggregate of several Program projects will result in overall improvements. Thus, any technical evaluations must consider project level and cumulative effects. To the extent possible, all projects or actions under the Bay-Delta Program should identify, as part of the planning process and as part of the CEQA/NEPA compliance process, water quality

impacts and benefits of the project or action. This should be a technical evaluation based on the best information available. This evaluation should include impacts of either a continuous or intermittent nature, the magnitude of the impacts, and the ultimate effect on Delta water quality and drinking water quality. For this water quality policy framework, the primary constituents of concern are pathogens, organic carbon, bromide, salinity, nutrients, taste and odor, and turbidity. In some cases it may not be possible to evaluate water quality impacts due to a lack of information. In those cases, project implementation should include monitoring and adaptive management steps.

2. Where feasible, Bay-Delta Program projects or actions should attempt to develop reasonable alternatives that still meet the project goals, but that avoid drinking water quality degradation or improve water quality. For example, if, by altering the timing of water entering and leaving a wetlands project, seawater intrusion can be reduced rather than increased without affecting the project goals, that alternative should be considered.
3. The information on water quality impacts/benefits, mitigation measures incorporated into projects and potential alternatives for Program projects should be considered as part of the Program decision-making and implementation process for both the project and the Program as a whole. The Bay-Delta should endeavor to bundle projects for implementation to ensure that the Program target of continuously improving Delta water quality for all uses is achieved.
4. The water quality assessments of projects and actions should include the following:
 - a. The spatial and temporal parameters of linked projects or actions should be explicitly considered, described, and delineated.
 - b. A project's or action's mitigation monitoring plan (as provided for under CEQA) may provide a vehicle for monitoring of impacts and implementation of this policy.
 - c. Program agencies should provide forecasts of water quality changes due to any proposed changes in water supply operations, to the extent that water quality forecasting tools are available. This water quality information should accompany annual or more frequent water supply allocations, as well as long-term or ad hoc planning efforts, such as DWR's Bulletin 160 series (*The California Water Plan Update*) or the Governor's *Critical Water Shortage Contingency Plan*. Where forecasting tools are not available, the need should be identified and agencies should work with the Science program to develop appropriate tools.
 - d. As noted in the CALFED Record of Decision, consideration should be given to water supply, water quality, and ecosystem needs when considering Central Valley Project and State Water Project operations.

Operational decisions made in Program forums or processes, such as the CALFED Operations Groups ("CALFED Ops"), the Water Operations Management Team, and the Environmental Water Account, should be balanced and consider water quality impacts concurrently with water supply and fishery impacts. Operations decision processes should explicitly consider and report potential impacts to water quality. It is understood that such consideration will be given within the legal mandates of water supply and fisheries protection requirements. When such decisions are not protective of drinking water quality, mitigation or other measures, as appropriate and consistent with this policy framework, should be provided for unavoidable significant adverse impacts (e.g., for projects or actions that are not exempt from NEPA or CEQA).

- e. Operational criteria for existing and future surface storage reservoirs should include water quality. For example, water quality should be a legitimate criterion among other traditional reservoir operating criteria, such as power generation, fish and wildlife enhancement, and recreation.
- f. A precise definition of water quality degradation will need to be developed in order to implement this policy framework. Factors such as modeling uncertainty, limits of detection and parameters for determining the degree to which tradeoffs, offsets or mitigation measures compensate for increases of constituents of concern will need to be considered. The Bay-Delta Science Program should be consulted for its recommendations during the development of this definition.

Attachments:

Examples of Impacts and Mitigation Strategies from the CALFED PEIS/PEIR

Summary of Potentially Significant Adverse Impacts and Mitigation Strategies Associated with the Preferred Program Alternative

Potentially Significant Adverse Impacts

Releases of inorganic and organic suspended solids into the water column and turbidity resulting from increased erosion during construction, dredging, or drainage of flooded lands (7,8,9,19).

Releases of toxic substances, such as pesticides, selenium, and heavy metal residues, into the water column during construction and dredging and other program actions (7,8,9,14,15,19).

Net increases in salinity, if evaporation increases from in-Delta storage or converting irrigated cropland to wetlands (2,3,13).

Increased EC (a measure of salinity) of water in a few localized areas of the central Delta would result in a potentially significant unavoidable impact on the local suitability of the water as a source for agricultural irrigation. (2,3,12).

Increases of TOC in river water caused by the increased contact between flowing or ponded water and vegetation or peat soils that would result from conversion of agricultural lands to wetlands and from actions in other Program elements (4,5,10,11,12).

Increased water temperatures and resultant decreased dissolved oxygen concentrations due to the increased residence time of water in the Delta (2,3,13).

Decreases in in-stream water quality if water use efficiency measures or water transfers reduce diluting flows (1,2,3).

Increases in concentrations of constituents of concern if water transfers reduce in-stream flows and deplete river assimilative capacities (1,2,3,6).

Increases in methylation of mercury in constructed shallow-water habitat (16).

Degradation of surface water by the transfer of poorer quality groundwater (2,3).

Changes in natural flow regimes in areas where new surface storage is built (17).

Surface storage inundation of toxic material (18).

Mitigation Strategies

1. Improving treatment levels provided at municipal wastewater treatment plants to upgrade the quality of the constituents of concern discharged to receiving waters in order to compensate for the reduction in dilution caused by improved water use efficiency or water transfers. Salt concentrations in discharges could be reduced by improved salt management of wastewater inputs to treatment plants.
2. Releasing additional water from enlarged or additional off-stream surface storage, or from additional groundwater storage.
3. Releasing additional water from storage in existing reservoirs or groundwater basins.
4. Treating water at the source (such as Delta drains), upgrading water treatment processes at drinking water treatment plants, and/or providing treatment at the point of use (consumer's tap).
5. Using innovative, cost-effective disinfection processes (for example, UV irradiation and ozonation in

combination with other agents) that form fewer or less harmful DBPs

6. Using existing river channels for water transfers and timing the transfers to avoid adverse water quality impacts.
7. Using best construction and drainage management practices to avoid transport of soils and sediments into waterways.
8. Using cofferdams to construct levees and channel modifications in isolation from existing waterways.
9. Using sediment curtains to contain turbidity plumes during dredging.
10. Separating water supply intakes from discharges of agricultural and urban runoff.
11. Applying agricultural and urban BMPs, and treating drainage from lands with concentrations of potentially harmful constituents to reduce contaminants. Treating drainage from agricultural lands underlain by peat soils to remove TOC.
12. Relocating diversion intakes to locations with better source water quality.
13. Restoring additional riparian vegetation to increase shading of channels.
14. Conducting core sampling and analysis of proposed dredge areas and implementing engineering solutions to avoid or prevent environmental exposure of toxic substances after dredging. Capping exposed toxic sediments with clean clay/ silt and protective gravel.
16. Testing for mercury in soils and locating constructed shallow-water habitat away from sources of mercury until methods for reducing mercury in water and sediment are implemented.
17. Operating surface storage release times and magnitude to mimic natural regimes.
18. Avoiding inundation or designing solutions to inundation of toxic materials, such as covering with an engineered cap.
19. Scheduling ground-disturbing construction during the dry season.

Bold indicates a potentially unavoidable significant impact.

5.3.11 MITIGATION STRATEGIES

These mitigation strategies will be considered during project planning and development. Specific mitigation measures will be adopted consistent with the Program goals and objectives and the purposes of site-specific projects. Not all mitigation strategies will be applicable to all projects because site-specific projects will vary in purpose, location and timing.

Ecosystem Restoration Program. The Ecosystem Restoration Program element could increase the TOC content of Delta waters. TOC concentrations could increase as a result of having more aquatic vegetation. TOC contributes to the formation of DBPs, some of which have been shown to cause significant health problems. Therefore, the release of TOC is not as critical as TOC being increased at municipal water supply intakes. The following mitigation strategies could be employed: TOC increases may be mitigated by locating created wetlands away from drinking water intakes, by treating wetland discharges, or by treating water to remove TOC before it is disinfected and supplied to water system customers.

The Water Use Efficiency and Water Transfer Program elements of the alternatives, would result in some localized adverse impacts on water quality which could be mitigated, in most cases, by release of greater volumes of fresh water from upstream reservoirs.

The Ecosystem Restoration Program could promote the conversion of elemental mercury into the bioavailable form, methyl mercury. Increasing methyl mercury production would happen only if mercury-laden sediment or water were allowed into constructed shallow-water habitat. Therefore, shallow-water habitat would need to be located away from mercury sources until such time as methods for eliminating mercury from water and sediment are implemented.

Ecosystem Restoration Program actions are proposed for portions of the Delta and Bay Region that may result in coincidental beneficial water quality impacts, according to model results on concepts of several projects. Detailed studies of these projects have not been conducted, and further studies are being pursued (as part of Stage 1 implementation). If these projects meet the CALFED solution objectives, project-specific environmental evaluation and documentation will address the environmental impacts of individual projects. Should a project be considered for construction with beneficial water quality impacts as part of the project, these beneficial impacts may be considered as mitigation for other Program actions. Considering the preliminary nature of information about these projects, it is uncertain whether the projects will be able to reduce adverse salinity impacts to a less-than-significant level.

Levee System Integrity Program. Construction activities for the Levee System Integrity Program would be similar to and integrated with those described for the Ecosystem Restoration Program. Existing levees would be demolished, and new levees would be constructed either at or close to the site of the original levees or set back some distance from the original levees if a channel is to be widened or a wetland created. Short-term effects on water quality would be similar to those described for the Ecosystem Restoration Program but would occur only in the Delta Region. Local increases in the TSS content of waters in Delta channels are expected. Some increase in nutrient and TOC concentrations also may occur. Toxic substances contained in old levees or in channel sediments could be released during demolition or dredging. Dredged materials will be analyzed, dredged, and handled in accordance with permit requirements. Permits will incorporate mitigation strategies identified in Section 5.3.11 to prevent release of contaminants of concern.

It is expected that short-term construction impacts can be reduced to a less-than-significant level by employing construction methods that minimize in-water construction and by applying appropriate mitigation strategies. Soils in the levees and channel sediments would be tested prior to commencement of construction so that the need for special mitigation measures can be determined. (See □□Sediment Dredging and In-Channel Earth Movement, below.)

Water Use Efficiency Program. Increased water use efficiency would adversely affect water quality when the volume of municipal wastewater or agricultural tailwater discharged to a stream is reduced but the mass load of salts and other contaminants in the discharge remains the same. The adverse effect would be most pronounced in streams where municipal or agricultural discharges represent a substantial proportion of streamflow. Adverse effects would occur most acutely in small streams in the Sacramento River and San Joaquin River Regions, downstream of municipal and agricultural wastewater discharges.

It is expected that the localized adverse water quality impacts of the program can be mitigated to a less-than-significant level by increasing treatment of wastewater before it is discharged to waterways or increasing fresh-water releases from reservoirs to provide more dilution water.

Water Transfer Program. Water transfers could affect water quality primarily through changes to river flow and water temperatures. The source of water for a transfer; and the timing, magnitude, and pathway of each transfer would affect the potential for significant impacts. Because specific transfers can invoke both beneficial and adverse impacts, at times on the same resource, net effects must be considered on a case-by-case basis. Water transfers could result in a potentially significant adverse (although localized) impact on water quality if diversions are transferred in a pipeline or canal to the area of use. For direct groundwater transfers, water quality could be adversely affected if the groundwater source is of poorer quality than the conveying channel. Possible methods to mitigate these adverse impacts could include:

- Requiring transferred water to be conveyed through natural channels to the area of use where feasible.
- Developing water transfer rules that protect downstream users (see Section 7.2.7.3).

Storage. All of the long-term adverse effects of surface and groundwater storage on water quality could be reduced to a less-than-significant level by various mitigation measures. Surface water reservoirs could be sited to avoid areas where rocks contain mercury or other potentially hazardous substances. If avoidance is impossible, rock outcrops could be covered with inert materials and vegetation cleared from the site to minimize the development of anaerobic conditions at the bottom of reservoirs. Outlet works at the reservoirs could be designed with multiple outlet portals to minimize depression of dissolved oxygen concentrations, to minimize the elevation of dissolved nitrogen concentrations, and to better control the temperature of released water. Water could be released from surface storage reservoirs to simulate natural flows in the small stream on which they are built.

Sediment Dredging and In-Channel Earth Movement. Sediment that is dredged from the Bay and Delta has the potential to cause water quality impacts due to the chemical quality of the sediment and its final disposition. Suitability of reuse of the sediment depends on its soil properties and the final disposition of the sediment.

The Program proposes to dredge sediment in Delta channels for a variety of reasons, including to widen or deepen channels and to deepen intake structures. Other sediment dredging and earth moving (or channel modification) may be conducted to modify levees, provide habitat, or build up areas for the protection of habitat. Each of these activities could benefit from soils dredged from Delta channels.

Sediment with toxic materials (such as mercury) must be prevented from degrading water quality. The potential to degrade water quality is related to the concentrations of toxic material, its contact with surface water, and the mechanisms by which the material becomes toxic to aquatic organisms.

Much of the mercury in dredged sediment is not an immediate threat to aquatic organisms. Mercury must be transformed to a toxic form to affect the ecosystem. In nature, this transformation is accomplished through bacteria that exist in the greatest numbers in shallow-water habitat. Therefore, mercury that remains buried under sediment or in a levee may not pose a substantial threat to the environment. The

transformation of other toxic materials is less complicated. Preventing release to the environment of toxic materials often requires simply segregating the material from contact with surface water.

Each application of dredged sediment would be assessed for sediment quality through core sampling (both of the removed sediment and the sediment that is exposed on the channel bottom). The proposed placement of the material would be based on the quality of the sediment. The sediment would be assessed for suitability both from a soil property and a chemical quality standpoint. Criteria set by regulatory authorities would need to be met for placement of the dredged sediment. Other permit requirements should include the following mitigation strategies as principal methods of preventing the release of sediment and toxic material into surface water. These mitigation strategies will be applied in various ways to achieve the best protection of the environment.

Sediment curtains or cofferdams (a method of separating disturbed sediment from surrounding stream water) will be used in all cases of dredging and in-stream earth moving. Performing specific sediment core sampling prior to project implementation will provide the information necessary to determine the suitability of the soils for placement. Quality information (both soil properties and chemical qualities) from the cores will be compared to criteria set by regulatory authorities, and the appropriate mitigation measures will be identified and implemented. In some cases, simple separation of mercury-laden soils and surrounding water is necessary to prevent releases of additional mercury into the environment. Separation may be provided by a few centimeters of fine soils (capping) that are protected from erosion by various means (such as vegetation or gravel). Not all sediment is expected to be suitable for placement near water or human exposure. Regulatory agencies will set criteria for those soils not suitable for reuse.

The following mitigation strategies can be implemented to reduce water quality impacts:

- Improving treatment levels provided at municipal wastewater treatment plants to upgrade the quality of the constituents (other than dissolved inorganic solids) discharged to receiving waters in order to compensate for the reduction in dilution caused by improved water use efficiency or water transfers. Salt concentrations in discharges could be reduced by improved salt management of wastewater inputs to treatment plants.
- Releasing additional water from enlarged or additional off-stream surface storage, or from additional groundwater storage.
- Releasing additional water from storage in existing reservoirs or groundwater basins.
- Treating water at the source (such as Delta drains), upgrading water treatment processes at drinking water treatment plants, and/or providing treatment at the point of use (consumer's tap). Using a mix of alternative source waters to reduce the influent bromide concentration.
- Using innovative, cost-effective disinfection processes (for example, UV irradiation and ozonation in combination with other agents) that form fewer or less harmful DBPs.
- Using existing river channels for water transfers and timing the transfers to avoid adverse water quality impacts.
- Using best construction and drainage management practices to avoid transport of soils and sediments into waterways.
- Using cofferdams to construct levees and channel modifications in isolation from existing waterways.
- Using sediment curtains to contain turbidity plumes during dredging.

- Separating water supply intakes from discharges of agricultural and urban runoff.
- Applying agricultural and urban BMPs, and treating drainage from lands to reduce contaminants. Treating drainage from agricultural lands underlain by peat soils to remove TOC.
- Relocating diversion intakes to locations with better source water quality.
- Restoring additional riparian vegetation to increase shading of channels.
- Conducting core sampling and analysis of proposed dredge areas and engineering solutions to avoid or prevent environmental exposure of toxic substances after dredging.
- Capping exposed toxic sediments with clean clay/silt and protective gravel.
- Locating constructed shallow-water habitat away from sources of mercury until methods for reducing mercury in water and sediment are implemented.
- Engineering surface storage release times and magnitude to mimic natural regimes.
- Avoiding inundation or engineering solutions to inundation of toxic materials, such as covering with an engineered cap.
- Scheduling ground-disturbing construction during the dry season.

5.3.12 POTENTIALLY SIGNIFICANT UNAVOIDABLE IMPACTS

One potentially significant adverse impact on water quality that is associated with the Preferred Program Alternative may not be reduced to a less-than-significant level by mitigation. This impact is an unavoidable consequence of implementing the Preferred Program Alternative.

Although the Preferred Program Alternative would improve water quality at many locations in the Delta, it would cause water quality to deteriorate in others. Without a diversion facility on the Sacramento River, impacts on water quality associated with the Preferred Program Alternative would be similar to those for Alternative 1. The increased EC (a measure of salinity) of water in localized areas of the central Delta would result in a potentially significant and unavoidable impact on the suitability of the water as a source for agricultural irrigation.

CALFED ROD Pages 17-18

Water Quality Program

The CALFED Program is committed to achieving continuous improvement in the quality of the waters of the Bay-Delta system with the goal of minimizing ecological, drinking water and other water quality problems. Improvements in water quality will result in improved ecosystem health, with indirect improvements in water supply reliability. Improvements in water quality also increase the utility of water, making it suitable for more uses and reuses.

The Water Quality Program includes the following actions;

- Drinking water parameters - Reduce the loads and/or impacts of bromide, total organic carbon (TOC), pathogens, nutrients, salinity, and turbidity through a combination of measures that include source reduction, alternative sources of water, treatment, storage and if necessary, conveyance improvements such as a screened diversion structure (up to 4000 cfs) on the Sacramento River between Hood and Georgiana Slough. The Conveyance section of this document includes a discussion of this potential improvement.
- Pesticides - Reduce the impacts of pesticides through (1) development and implementation of BMPs, for both urban and agricultural uses; and (2) support of pesticide studies for regulatory agencies, while providing education and assistance in implementation of control strategies for the regulated pesticide users.
- Organochlorine pesticides - Reduce the load of organochlorine pesticides in the system by reducing runoff and erosion from agricultural lands through BMPs.
- Trace metals - Reduce the impacts of trace metals, such as copper, cadmium, and zinc, in upper watershed areas near abandoned mine sites. Reduce the impacts of copper through urban storm water programs and agricultural BMPs.
- Mercury - Reduce mercury levels in rivers and the estuary by source control at inactive and abandoned mine sites.
- Selenium - Reduce selenium impacts through reduction of loads at their sources and through appropriate land fallowing and land retirement programs.

- Salinity - Reduce salt sources in urban and industrial wastewater to protect drinking and agricultural water supplies, and facilitate development of successful water recycling, source water blending, and groundwater storage programs. Salinity in the Delta will be controlled both by limiting salt loadings from its tributaries, and through managing seawater intrusion by such means as using storage capability to maintain Delta outflow and to adjust timing of outflow, and by export management.
- Turbidity and sedimentation - Reduce turbidity and sedimentation, which adversely affect several areas in the Bay Delta and its tributaries.
- Low dissolved oxygen - Reduce the impairment of rivers and the estuary from substances that exert excessive demand on dissolved oxygen.
- Toxicity of unknown origin - Through research and monitoring, identify parameters of concern in the water and sediment and implement actions to reduce their impacts to aquatic resources.

California Bay-Delta Public Advisory Committee

Meeting Date: 9/11/03
Agenda Item: 4

Bay-Delta Program Plans Follow-Up

Description:	Committee recommendation to Federal participating agencies on Multi-Year Program Plans (Years 4-7).
Recommended Action:	Recommend approval of program plans.

Staff Recommendation

Authority staff recommends the California Bay-Delta Public Advisory Committee recommend approval of the Multi-Year Program Plans (Years 4-7) to the Federal agencies participating in the Program. The program plans, approved by the California Bay-Delta Authority on August 14, 2003, generally incorporated subcommittee recommendations. The Federal agencies are requesting the Committee take action by recommending approval of the plans so that the agencies can accept the subcommittee recommendations contained in those plans.

Background

At the June 5, 2003 meeting, the Committee deliberated on and accepted for consideration recommendations from the following subcommittees on the draft Multi-Year Program Plans (Years 4-7):

- Delta Levees and Habitat
- Ecosystem Restoration
- Environmental Justice
- Water Supply
- Working Landscapes

In addition, the Committee considered comments from members at the meeting for incorporation into the final plans.

On August 14, the California Bay-Delta Authority, during its deliberations on the revised program plans, heard testimony from the subcommittee co-chairs. The co-chairs, while expressing various concerns about schedules, priorities, funding, and

diminished Federal agency participation, did not object to approval of the plans, which generally incorporated their recommendations and comments.

Committee Role

The Committee Federal charter (refer to agenda item 2) states that the Committee provides recommendations on program plans and other topics to the Secretary of the Interior, other participating Federal agencies, the Governor, Congress, the Legislature, the Authority and other interested parties. The Federal Advisory Committee Act requires that advice and recommendations of the subcommittees be deliberated upon by the full Committee. The Federal agencies, in order to accept the subcommittee recommendations, are requesting the Committee recommend approval of the plans, which incorporate the subcommittee recommendations.

Attachments:

Storage Program Multi-Year Program Plan (Years 4-7)
(Other program plans were included in the August 14, 2003 Bay-Delta Authority meeting packet and are available at <http://calwater.ca.gov>. For program plan goals and accomplishments refer to agenda item 5, attachment 1)

California Bay-Delta Program

Storage Program Multi-Year Program Plan (Years 4-7)

Implementing Agencies:

Department of Water Resources

United States Bureau of Reclamation

August, 2003



Goals and Objectives

Goals of the Program and CALFED Record of Decision Commitments

The goal of the Storage Program is to expand storage capacity to increase operational flexibility and water supply reliability in an effort to improve water quality and support fish restoration efforts.

The CALFED Record of Decision (ROD) identified six commitments to be met. For each ROD commitment, key objectives have been identified for the Storage Program:

- Development of approximately 250 TAF of In-Delta Storage
 - Provides fishery benefits and enhances water project flexibility
 - Could be achieved through implementation of a re-engineered in-Delta storage project that will meet the ecosystem needs in the Delta and provide water supply reliability
 - State and Federal agencies will make a decision regarding the feasibility of an In-Delta storage project and the appropriateness of initiating negotiations with Delta Wetlands owners or other appropriate landowners for acquisition of necessary property
 - State and Federal agencies will develop a project plan that addresses local concerns regarding effects on neighboring lands and complete any additional needed environmental documentation
- Enlargement of Shasta Lake storage by approximately 300 TAF
 - Increases the pool of cold water available to maintain lower Sacramento River temperatures needed by anadromous fish
 - Provides other water management benefits, such as water supply reliability
 - To the extent possible, includes features to benefit other identified ecosystem, flood control, and related water resources needs
- Expansion of Los Vaqueros Reservoir by up to 400 TAF
 - Provides water quality and water supply reliability benefits to Bay Area water users
 - Department of Water Resources (DWR) and U.S. Bureau of Reclamation (USBR) are working with Contra Costa Water District (CCWD) and interested stakeholders to assure that previous commitments, including local voter approval required for expansion, are respected

- Development of up to 1.9 MAF of North-of-the-Delta Offstream Storage
 - Enhances water management flexibility in the Sacramento Valley while reducing diversions on the Sacramento River during critical fish migration periods
 - Increases reliability of supplies for a significant portion of the Sacramento Valley
 - Provides storage and operational benefits for other California Bay-Delta Programs, including water quality and the Environmental Water Account
- Development of 250 TAF to 700 TAF of Storage in the Upper San Joaquin River Basin
 - Contributes to restoration of and improved water quality for the San Joaquin River
 - Facilitates conjunctive management and water exchanges that improve the quality of water deliveries to urban communities
 - Improves CVP water supply reliability south of the Delta
 - Increases flood protection in the San Joaquin Valley
 - Increases power generation
- Groundwater Conjunctive Management Projects with Total Capacity of 500 TAF to 1 MAF
 - Increases water supply reliability statewide through the planned, coordinated local management and use of groundwater and surface water resources
 - Develops a basic understanding of individual groundwater basins
 - Identifies basin management strategies and objectives
 - Plans and conducts groundwater studies
 - Designs and constructs conjunctive use projects

Each of these commitments is being assessed individually and in coordination with one another to ensure consistent assumptions, review, and coordination with other California Bay-Delta Program goals.

Accomplishments

Development of 250 TAF of In-Delta Storage

DWR and USBR completed a joint planning study, including pre-feasibility evaluation of alternatives.

Released the In-Delta Storage Program Draft Summary Report and supplemental reports on operations, water quality, engineering, environmental and economic evaluations in May 2002.

DWR and USBR continued technical studies of risk, design, operations, water quality, environmental impacts, benefits, and costs. Revised studies are scheduled for completion by June 30, 2003.

Enlargement of Shasta Lake Storage by 300 TAF

State and Federal agencies concurred to continue with planning studies to evaluate if the proposed Shasta Lake enlargement would impact the Wild and Scenic reach of the McCloud River.

Initiated feasibility study.

Identified potential impacts and evaluating alternatives to avoid/mitigate impacts on the McCloud River.

Expansion of Los Vaqueros Reservoir by up to 400 TAF

Identified potential local partners and developed agreements with CCWD and other stakeholders for necessary studies. Signed a Memorandum of Understanding (MOU).

Initiated feasibility study.

Completed a Draft Project Concept Report (pre-feasibility) and Executive Summary.

Conducted initial public meetings.

Development of up to 1.8 MAF of North-of-the-Delta Offstream Storage

Signed a joint planning MOU by 12 local water agencies and counties and five state and federal agencies.

Filed the Notice of Preparation (NOP) at the State Clearinghouse.

Published the Notice of Intent (NOI) in the Federal Register.

Completed public and tribal scoping.

Completed and released a scoping report.

Initiated CALSIM II modeling runs of preliminary operations scenarios.

Began work on the environmental documentation and engineering feasibility study.

Development of 250 to 700 TAF of storage in the Upper San Joaquin River Basin

Identified surface storage options that could contribute to program objectives.

Completed preliminary operation studies for single-purpose analysis for identified surface storage options.

Completed a Draft Phase I in-progress report including appraisal level evaluations of surface storage alternatives.

Held 5 public stakeholder workshops to encourage participation by interested parties in the formulation and evaluation of alternatives.

Initiated a feasibility study.

Groundwater Conjunctive Management Projects with Total Capacity of 500 TAF to 1 MAF

Executed an MOU with 30 local agency partners and provided technical and financial assistance to study the groundwater basins and assess opportunities for conjunctive water management.

Provided technical and financial assistance to local partners for assessing in-basin needs, development of basin-wide planning and management strategies, project formulation, and commencement of pilot projects.

Provided independent facilitation/mediation services to local partners to improve stakeholder involvement, foster local support for improved groundwater management, and to enhance stakeholder understanding of water resource issues and needs.

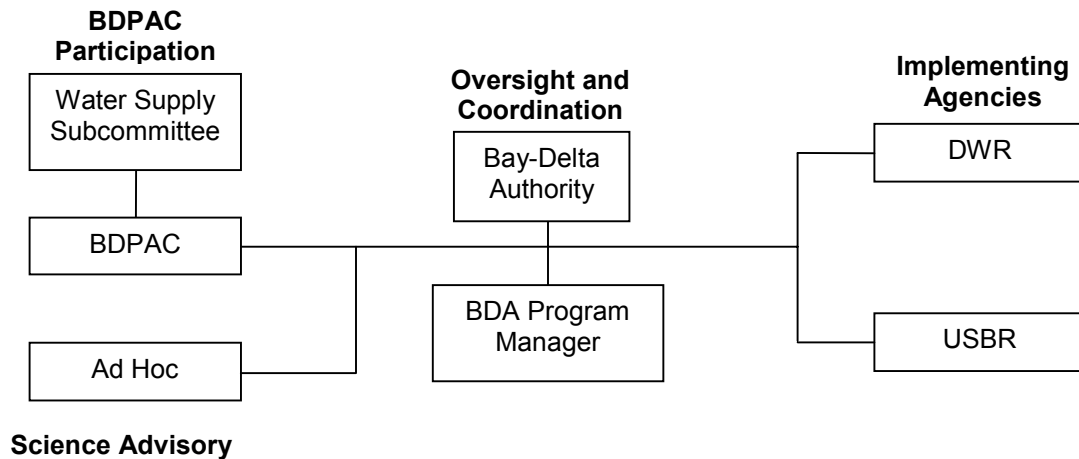
Coordinated conjunctive water management activities in the Central Valley with the North-of-the-Delta Offstream Storage and Upper San Joaquin River Basin Storage investigations.

Awarded \$18.5 million of Water Bond 2000 (Proposition 13) funds in Year 1 and \$500,000 in Year 2 to conduct feasibility and pilot studies. Awarded 15 grants and loans totaling \$102.7 million for construction projects in Year 2. The estimated average annual yield of the funded projects is 130 TAF.

Awarded \$5 million of Local Groundwater Management Assistance Act (AB 303) grants to local agencies for 23 groundwater studies and projects in Year 1. Awarded 21 grants totaling \$4.4 million in Year 2.

Provided input on SB 1938, which requires, effective 1/1/03, adoption of groundwater management plans with specific components if agencies seek funding administered by DWR for groundwater projects.

Program Structure



Agency	Roles and Responsibilities
California Bay-Delta Authority	<ul style="list-style-type: none"> Oversight and coordination Lead agency with DWR on Water Management Strategy
Department of Water Resources	<ul style="list-style-type: none"> Lead agency for CEQA compliance on surface storage projects Responsible for implementation of groundwater conjunctive management program
U. S. Bureau of Reclamation	<ul style="list-style-type: none"> Lead agency for NEPA compliance on surface storage projects Co-Lead agency with DWR on Los Vaqueros Reservoir Expansion
Bureau of Indian Affairs	<ul style="list-style-type: none"> Participating agency
U.S. Fish and Wildlife Service	<ul style="list-style-type: none"> Participating agency
U.S. Forest Service	<ul style="list-style-type: none"> Participating agency
National Oceanic and Atmospheric Administration Fisheries	<ul style="list-style-type: none"> Participating agency
U. S. Army Corps of Engineers	<ul style="list-style-type: none"> Participating agency
Department of Fish and Game	<ul style="list-style-type: none"> Participating agency
Glenn-Colusa Irrigation District	<ul style="list-style-type: none"> Management Team Partner in the North-of-the-Delta Offstream Storage
Tehama-Colusa Canal Authority	<ul style="list-style-type: none"> Management Team Partner in the North-of-the-Delta Offstream Storage
Contra Costa Water District	<ul style="list-style-type: none"> Manages Los Vaqueros Reservoir Expansion
Local Groundwater Agency partners	<ul style="list-style-type: none"> Lead agencies for development and implementation of groundwater studies conjunctive water management projects

Major Activities

Development of 250 TAF of In-Delta Storage

Local Implementation – DWR and Reclamation are continuing to coordinate with local water agencies, county agencies, local landowners, reclamation districts, and the Delta Protection Commission.

Public Involvement – DWR and Reclamation will hold public scoping meetings on the Subsequent EIR/EIS.

Stakeholder Consultation – DWR and Reclamation will hold Stakeholder Committee meetings during the year and will solicit written comments during public review periods.

State and Federal Agency Consultation – the Federal-State Technical Coordination Committee will continue coordination. Agency coordination also continues through the engineering, operations, water quality, environmental, policy, and implementation, and economic investigations committees.

Environmental Justice – DWR and Reclamation will address environmental justice through the Stakeholder Committee and in the Subsequent EIR/EIS work.

Tribal Consultation and Involvement – Reclamation, with support by DWR, will send mailings to the tribes in the public involvement process.

Land Acquisition – Upon a decision to proceed, DWR will initiate the purchase of most of the four Delta islands.

Environmental Documentation – DWR and Reclamation will begin work on the Subsequent EIR/EIS. The two agencies will also meet with regulatory agencies on the status of the existing permits and Biological Opinion obtained by the Delta Wetlands Properties.

Mitigation Measures – DWR and Reclamation will evaluate mitigation measures identified in the Guide to Regulatory Compliance for Implementing CALFED Actions and in the ROD during the State Feasibility Study for the Program.

Mitigation Monitoring – DWR and Reclamation will identify issues that will be addressed in the Mitigation Monitoring Plan. The Mitigation Monitoring Plan will be developed during the Subsequent EIR/EIS process in Years 4 and 5.

Adaptive Management/Science – the California Bay-Delta Program Science Review Panel will review the June 2003 Feasibility Study documents, and will guide the short-term and long-term water quality studies.

Schedule: Completion December 2005

Enlargement of Shasta Lake Storage by 300 TAF

Public Involvement and Stakeholder Consultation – Reclamation, with support from DWR, will schedule public meetings after the scoping process is initiated in mid-2003. USBR is developing a public outreach plan.

Tribal Consultation – USBR will continue to coordinate with potentially affected Native American Tribes in the project area.

Environmental Documentation – Reclamation, with participation by DWR, will complete a feasibility study, a Draft and Final EIR/EIS, an ASIP, and will seek a Record of Decision (ROD).

Schedule: Completion June 2006

Expansion of Los Vaqueros Reservoir by up to 400 TAF

Local Implementation – California Bay-Delta Authority (CBDA), DWR, USBR, and CCWD are coordinating with the Bay Area water agencies on the project.

State and Federal Agency Coordination – CCWD, DWR, and/or Reclamation will present regular updates to the State and Federal agencies and the BDPAC Water Supply Subcommittee.

Tribal Consultation – The Study Team will build upon existing agreements to work with USBR regarding Native American issues, as required.

Environmental Documentation and Tiering – Preparation of the Draft Planning Report and additional public meetings will be completed by July 2003. Pending approval by the CCWD Board of Directors in August 2003 and by the CCWD customers in the form of an advisory vote in March 2004, the feasibility study will proceed and formal scoping for environmental review will be initiated. If the studies receive local approval and progress into full environmental review, environmental studies will be conducted in accordance with the CALFED ROD. A Draft EIR/EIS will be completed by the end of 2004 and a Final EIR/EIS and preliminary design by mid-2005.

Construction – CCWD and other project beneficiaries will begin limited construction on certain facilities by the end of 2005. (Date is dependent upon completion of Federal Construction Authorization process, as applicable).

Project Operations – CCWD will continue to coordinate operations studies with existing operations.

Single Blueprint for Ecosystem Restoration – CCWD will coordinate Delta environmental enhancement through the Environmental Water Account with the Ecosystem Restoration Program.

Schedule: Completion June 2005

Development of up to 1.8 MAF of North-of-the-Delta Offstream Storage

Local Leadership – DWR and USBR will continue to work with Glenn-Colusa Irrigation District (GCID) and Tehama-Colusa Canal Authority (TCCA) to coordinate outreach activities.

Tribal Coordination – DWR and USBR will continue to coordinate with potentially affected Native American Tribes in the project area.

Stakeholder/Public Participation – DWR and USBR will conduct public workshops before the draft EIR/EIS is released.

Environmental Justice – DWR and USBR will coordinate with the BDPAC Environmental Justice Subcommittee to address potential environmental justice issues in the project area.

Environmental Documentation – DWR and Reclamation will complete an EIS/EIR, feasibility report, and ASIP. DWR and Reclamation will complete preliminary and final design, and request congressional authorization and financing.

Construction – Project beneficiaries will apply for construction and operation permits.

State and Federal Agency Coordination – DWR and Reclamation will present regular updates to the State and Federal agencies and BDPAC Water Supply Subcommittee.

Adaptive Management/Science – DWR will submit the report that summarizes the recommendations of the Sacramento River Flow Regime Technical Advisory Group to the California Bay-Delta Program Science Review Panel.

Beneficiaries Pay – DWR and USBR will work with the beneficiaries to develop cost-sharing plans when project beneficiaries are identified. CBDA, DWR and Reclamation, and local partners will identify project beneficiaries.

Schedule: Completion June 2005

Development of 250 to 700 TAF in the Upper San Joaquin River Basin Storage

Public Involvement/Stakeholder Consultation – Reclamation, with support from DWR, will hold public workshops at various locations in the San Joaquin Valley every two to three months.

Tribal Consultation/Involvement – Reclamation has committed to meet with 5 Indian tribes periodically to address any Indian Trust Asset responsibility, sensitive cultural resource issues, and to identify beneficial opportunities for the tribes.

State and Federal Agency Coordination – Reclamation and DWR will present regular updates to the State and Federal agencies and BDPAC Water Supply Subcommittee.

Environmental Documentation – Reclamation and DWR will complete a feasibility study, Draft and Final EIR/EIS, an ASIP, and will seek a ROD.

Schedule: Completion June 2006

Groundwater Conjunctive Management Projects with Total Capacity of 500 TAF to 1 MAF

Local Implementation – DWR will continue to work with local agency partners to improve groundwater monitoring and management, and to study, develop, and implement conjunctive water management projects and programs.

Public Involvement – DWR will hold meetings of advisory committees to develop funding recommendations after evaluations are completed by DWR staff for the Proposition 13 and AB 303 programs. Public meetings will be held to solicit input on preliminary recommendations.

Stakeholder Consultation – Advisory groups conducting basinwide planning and developing local conjunctive water management programs will generally meet monthly or quarterly, depending upon the consensus of the stakeholders.

State and Federal Agency Coordination – The State and Federal Agencies will be consulted following the review and evaluation of Proposition 13 Grants and Loans and Local Groundwater Assistance Fund (AB 303) grant proposals. USBR participation may be necessary for those projects that will utilize federal facilities or will need discretionary decisions for implementation of conjunctive water management strategies. Review by USBR, and SWRCB may be necessary as part of a conjunctive water management strategy. Participation by DFG, National Marine Fisheries Service (NOAA Fisheries), and/or U.S. Fish and Wildlife Service (USFWS) may be necessary for those projects that include modifications to existing surface water operations as part of a conjunctive water management strategy.

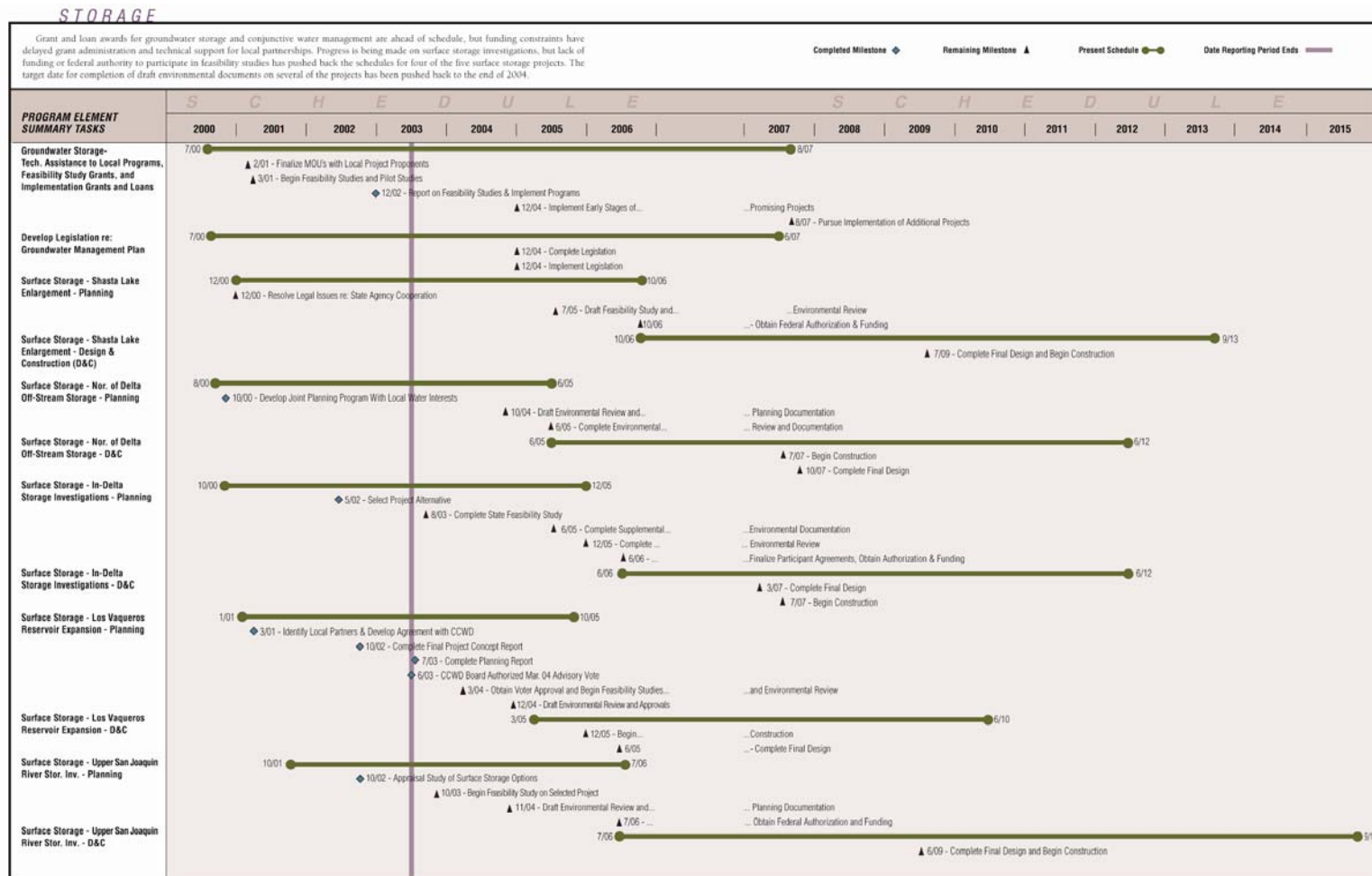
Beneficiaries Pay – DWR will work with local agencies to cost share project proposals to the extent possible. In Year 3, DWR will award 26 Local Groundwater Assistance grants totaling approximately \$5.8 million to conduct groundwater studies, monitoring, and management activities. DWR will award approximately \$86 million in Proposition 13 funding for groundwater storage and groundwater recharge projects. The grant evaluation criteria give a preference for local cost sharing; the local cost share on Year 2 construction grants was over 80%. DWR will evaluate applicability of Proposition 50 (Chapters 7 and 8) funding to groundwater storage and conjunctive management and develop competitive grant programs.

Environmental Documentation – Local agencies will complete feasibility studies that were awarded funding in Years 1 and 2, and will complete environmental documentation for construction grants and loans awarded in Year 2.

Construction – DWR and grant and loan recipients will execute contracts and begin construction on previously awarded construction grants and loans.

Schedule: Completion End of Stage 1

Schedule



Year 4 Activities

Development of 250 TAF of In-Delta Storage

Conduct the California Bay-Delta Program Science Panel and public reviews of the State Feasibility Study.

Schedule: Completion by September 2003.

Complete final In-Delta Storage Program State Feasibility Study Report.

Schedule: Completion by January 2004.

Solicit Bay-Delta Public Advisory Committee recommendation.

Schedule: Completion by February 2004.

Complete environmental documentation including evaluation of the project alternative options and supporting engineering, operations, water quality and economic studies for the Subsequent EIR/EIS. Prepare Draft EIR/EIS.

Schedule: Completion by July 2004.

Continue coordination with USFWS, DFG, NOAA Fisheries, COE and other State and Federal agencies for consultations to develop Action Specific Implementation Plans.

Schedule: Ongoing

Enlargement of Shasta Lake storage by 300 TAF

Complete systems modeling, design and cost estimates, and environmental studies for Alternatives Information Report.

Schedule: Completion by December 2003.

Complete preliminary draft feasibility report/ EIS/EIR.

Schedule: Completion by October 2004.

Expansion of Los Vaqueros Reservoir by up to 400 TAF

Complete Planning Report, associated technical memoranda and responses to comments.

Schedule: Completion by July 2003.

Address and meet six local agency commitments referred to in the ROD.

Schedule: Completion by July 2003

If the March 2004 advisory vote is positive, initiate scoping for the EIR/EIS and the engineering feasibility studies.

Schedule: Initiate in April 2004.

Issue NOI/NOP for environmental documents.

Schedule: Completion by June 2004.

Development of up to 1.8 MAF of North-of-the-Delta Offstream Storage

Complete Administrative Draft 404(b)(1) Alternatives Analysis Report.

Schedule: Completion by December 2003.

Complete Draft Screening Report for Westside Reservoir Alternatives and Conveyance Alternatives Report.

Schedule: Completion by December 2003.

Complete Public Draft 404(b)(1) Alternatives Analysis Report.

Schedule: Completion by June 2004.

Release Draft Feasibility Report, Draft EIR/EIS and ASIP.

Schedule: Completion by June 2004.

Complete Draft Fish and Wildlife Coordination Act Report.

Schedule: Completion by June 2004.

Development of 250 TAF to 700 TAF of storage in the Upper San Joaquin River Basin

Continue the feasibility study, including detailed feasibility level analysis of costs, benefits, and environmental impacts of the final array of alternatives.

Schedule: Ongoing

Initiate the formal EIS/EIR process.

Schedule: Start by late 2003.

Groundwater Conjunctive Management Projects with Total Capacity of 500 TAF to 1 MAF

State and Federal Agencies will review and concurrence will be solicited prior to awarding approximately \$86 million in Proposition 13 bond funds scheduled for award in State FY 2003-04.

Schedule: Completion by October 2003

State and Federal Agencies will review recommended Local Groundwater Assistance Fund project awards, totaling \$5 million.

Schedule: Completion by February 2004

Available funding from Proposition 50 will be evaluated for groundwater projects and competitive grant programs developed.

Schedule: Completion by June 2004.

DWR will continue to work with local agencies to develop locally controlled and managed groundwater programs. In addition, DWR will continue to provide oversight on projects awarded funding through the grants and loans program.

Schedule: Ongoing

It is anticipated that DWR will implement early stages of the most promising projects by the end of 2004 and aggressively pursue implementation of additional projects by the end of Stage 1.

Schedule: Ongoing

Integration with the Science Program

The Science Program will create a Science Standing Board for the Water Management Programs to advise the CBDA on storage issues including the five surface storage programs, groundwater storage and conjunctive use programs, and also help improve the exchange of information between the Science Program and agencies conducting studies. The Science Standing Board may set up steering committees for specialized areas of study for each storage program. For example, the Science Program will review the CALSIM II modeling tool, which will be used to evaluate the impacts and benefits of each storage project.

It has not been determined, at this time, how the California Bay-Delta Program Science Review Panel will be incorporated into the planning process for the Shasta Lake Enlargement, Los Vaqueros Reservoir Expansion, and Upper San Joaquin River Basin Storage investigations. The projects will participate in the peer review process for the overall storage program once that has been established. Quality control and assurance is being incorporated in all technical and scientific investigations for these planning studies.

A California Bay-Delta Program Science Review Panel completed a written review of the 2002 Planning Study Reports for In-Delta Storage. A report on the Science Panel review and DWR/USBR response will be released in August 2003 at the California Bay-Delta Program Science Workshop. Review of the June 2003 State Feasibility Study documents will occur in July to September 2003. The California Bay-Delta Program Science Panel is providing guidance to meet the short-term and long-term objectives for resolving the water quality issues. The DWR Independent Board of Consultants (IBC) completed a review of the 2002 Planning study in December 2001, and of the 2003 planning study in May 2003. A California Bay-Delta Program Science Review panel will be convened to review the recommendations of the Flow Regime Technical Advisory Group regarding the operations of the North-of-the-Delta Offstream Storage to minimize or avoid impacts to fish and provide ecosystem benefits in the Sacramento River. DWR has convened an independent board of consultants for reviewing engineering studies. The Board has reviewed the engineering feasibility studies. As the project progresses and the preliminary and final engineering design phases begin, the independent consulting board will be reviewing the engineering designs.

The Conjunctive Water Management Program (CWMP) will coordinate with the Science Program regarding standards used for measuring performance of feasibility studies, project implementability, and determining potential benefits and beneficiaries to ensure program consistency. The program has coordinated with the Science Program in development of Proposal Solicitation Process (PSP) reviews.

Cross-Program Relationships

Conveyance – Coordination with the individual storage programs and coordination with the Conveyance Program is ongoing.

Drinking Water Quality – The In-Delta Storage integration with other California Bay-Delta Program elements requires a balanced approach for linkages with shared state and federal water management of the SWP and CVP systems. The program is linked with local and regional agencies for resource management in the Delta. Other programs looking at water quality improvements include NODOS, Los Vaqueros Expansion, and the Upper San Joaquin River Basin Storage Investigations.

Levee System Integrity – The In-Delta Storage integration with other California Bay-Delta Program elements requires a balanced approach for linkages with shared state and federal water management of the SWP and CVP systems. The program is linked with local and regional agencies for resource management in the Delta.

Ecosystem Restoration – The In-Delta Storage integration with other California Bay-Delta Program elements requires a balanced approach for linkages with shared state and federal water management of the SWP and CVP systems. The program is linked with local and regional agencies for resource management in the Delta.

Coordination with the Ecosystem Restoration Program regarding the Upper San Joaquin River Basin Storage, North-of-the-Delta Offstream Storage, and Los Vaqueros Expansion is ongoing.

Environmental Water Account (EWA) – The In-Delta Storage integration with other California Bay-Delta Program elements requires a balanced approach for linkages with shared state and federal water management of the SWP and CVP systems. The program is linked with local and regional agencies for resource management in the Delta.

- Coordination with the EWA office is regular and frequent regarding the Los Vaqueros Reservoir Expansion.
 - Coordination with the EWA office regarding the North-of-the-Delta Offstream Storage is ongoing.
 - Coordination with the EWA office regarding Groundwater Conjunctive Management is ongoing.
-

Water Use Efficiency – Coordination between the Water Use Efficiency program and Groundwater Conjunctive Management is ongoing, and will be increased to address linkages between water application and groundwater recharge.

Science – The In-Delta Storage integration with other California Bay-Delta Program elements requires a balanced approach for linkages with shared state and federal water management of the SWP and CVP systems. The program is linked with local and regional agencies for resource management in the Delta.

Working Landscapes – Implementing agencies will inform and consult with the Working Landscapes Subcommittee of BDPAC, CDFA, DOC, and local interest groups as the project(s) develop.

Stage 1 Funding

Storage Funding (\$ in millions)	Program Year							Total
	1	2	3	4	5	6	7	
State	\$87.48	\$114.53	\$106.45	\$31.08	\$19.72	\$0.52	\$0.52	\$360.30
Federal	\$1.80	\$10.96	\$7.50	\$6.50				\$26.76
Local/Water User	\$0.00	\$0.00	\$0.00	\$0.00				\$0.00
Revised Stage 1 (Actual & Expected Funding) ¹	\$89.28	\$125.49	\$113.95	\$37.58	\$19.72	\$0.52	\$0.52	\$387.06
Original ROD (Aug, 2000) ²	\$50.0	\$75.0	\$138.0	\$208.0	\$266.0	\$349.0	\$339.0	\$1,425.0
Revised ROD (Dec, 2002) ³	\$94.3	\$130.2	\$113.6	\$157.0	\$137.2	\$444.4	\$851.1	\$1,927.8

¹ Funding for Years 1-2 reflects actual State encumbrances & expenditures and federal obligations. Funding for Year 3 reflects final State and Federal budgets. Funding for Year 4 reflects proposed Governor's and President's budgets. Expected funding in Years 5-7 includes remaining state bond funds until spent and ongoing State base funding. Federal appropriations for Years 5-7 are unknown; therefore, federal funding is not included beyond Year 4.

² Original Stage 1 funding estimates from the Record of Decision.

³ Revised ROD estimates are revised estimates of funding needs as of December 2002. These were included in the January 2003 program tracking report.

Stage 1 Funding by Task

Storage Funding (\$ in millions)	Program Year							Total
	1	2	3	4	5	6	7	
Groundwater								
Feasibility Study Grants	\$16.22	\$0.15	\$6.78					\$23.15
Technical Assistance to Locals	\$4.80	\$2.66	\$0.98					\$8.44
Implementation Grants and Loans	\$54.00	\$102.05	\$89.33	\$10.55				\$255.93
Surface Storage								
Shasta Lake Enlargement	\$1.00	\$1.83	\$2.08	\$2.75	\$0.20			\$7.86
North-of-the-Delta Off-stream Storage	\$8.45	\$6.05	\$5.17	\$8.45	\$8.24			\$36.36
In-Delta Storage Investigations	\$2.60	\$2.10	\$2.30	\$3.69	\$1.90			\$12.59
Los Vaqueros Reservoir Expansion	\$0.80	\$5.75	\$3.10	\$7.55	\$4.30			\$21.50
Upper San Joaquin River Storage Investigations	\$0.90	\$2.89	\$2.22	\$1.97	\$2.00			\$9.98
Oversight & Coordination	\$0.51	\$2.01	\$1.99	\$2.62	\$3.08	\$0.52	\$0.52	\$11.25
Revised Stage 1 (Actual & Expected Funding) ¹	\$89.28	\$125.49	\$113.95	\$37.58	\$19.72	\$0.52	\$0.52	\$387.06
Original ROD (Aug, 2000) ²	\$50.0	\$75.0	\$138.0	\$208.0	\$266.0	\$349.0	\$339.0	\$1,425.0
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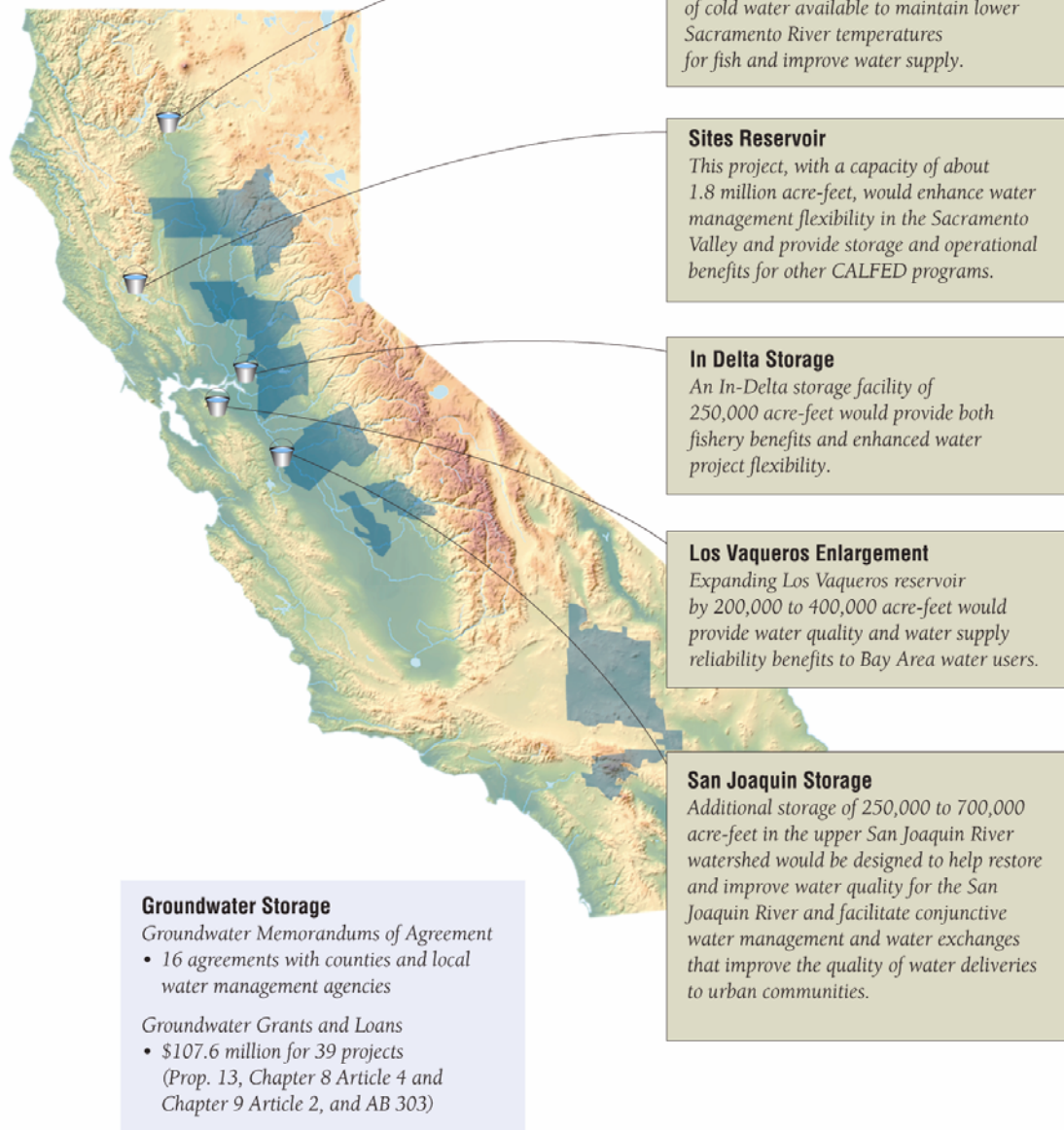
² Original Stage 1 funding estimates from the Record of Decision.

³ Revised ROD estimates are revised estimates of funding needs as of December 2002. These were included in the January 2003 program tracking report.

Project Map



POTENTIAL STORAGE PROJECTS



California Bay-Delta Public Advisory Committee

Meeting Date: 9/11/03
Agenda Item: 5

Year 3 Progress towards Balanced Implementation

Description:	Review of Bay-Delta Program accomplishments, performance, budgets, and regional planning; establishing priorities and future funding needs.
Recommended Action:	Committee report on progress and future priorities to California Bay-Delta Authority and implementing agencies.

Staff Recommendation

Authority Staff recommends the California Bay-Delta Public Advisory Committee provide a report or recommendation to the California Bay-Delta Authority and implementing agencies at the October 9, 2003 Authority meeting on State and regional priorities and future funding needs. The Committee report will assist the Authority in developing the annual report to the Governor, Secretary of the Interior, the Legislature, and Congress regarding the status of implementing the Program and a long-term strategy for future implementation.

Background

One of the major themes of this Committee meeting is reviewing accomplishments and funding for years 1 through 4 and beginning to set priorities and future funding needs. As background for the Committee's discussion, Attachment 1 (Multi-Year Goals and Objectives) compiles the program element goals and accomplishments contained in the Multi-Year Program Plans approved by the Authority on August 14, 2003. At the September 11 meeting in the morning, agency staff and the Committee will discuss the accomplishments in the context of performance measures.

Attachment 2 provides funding charts and tables for Years 1 through 3, by program element and objective, and proposed year 4 funding from State, Federal, and water user/local sources. Attachment 3 (Chapter 7 – Proposition 50 Funding) illustrates most of the available State funding for the next few years. At the meeting, an update on federal appropriations will be presented, as well. Review of this information will demonstrate that expected near-term funding will generally allow for continued balanced implementation of the Program.

However, due to fiscal crises and staffing shortages, expenditures of Proposition 50 funds may take longer than previously reported to the Committee. Although the extent of the delays are not known at this time, based on current schedules for Proposition 50 expenditures the Program will have serious funding shortfalls starting in year 6.

After a discussion on the California Water Plan Update, Water 2025 and the Bay-Delta Program (see Agenda Item 6), and during lunch, the Committee will be briefed on the Program's regional planning initiatives, in general, and specifically, on the Delta. The regional plans, to be developed in the coming year, are expected to be summaries of land and water uses, issues, priorities and activities, and are not as detailed as Integrated Regional Water Management Plans, called for in the Integrated Regional Water Management Planning Act of 2002 and Chapter 8 of Proposition 50 (see Agenda Item 6 for more detail).

The purpose of reviewing the Bay-Delta Program and the regional efforts is to provide the background for a robust afternoon discussion with Authority and agency staff on State and regional priorities and future funding needs.

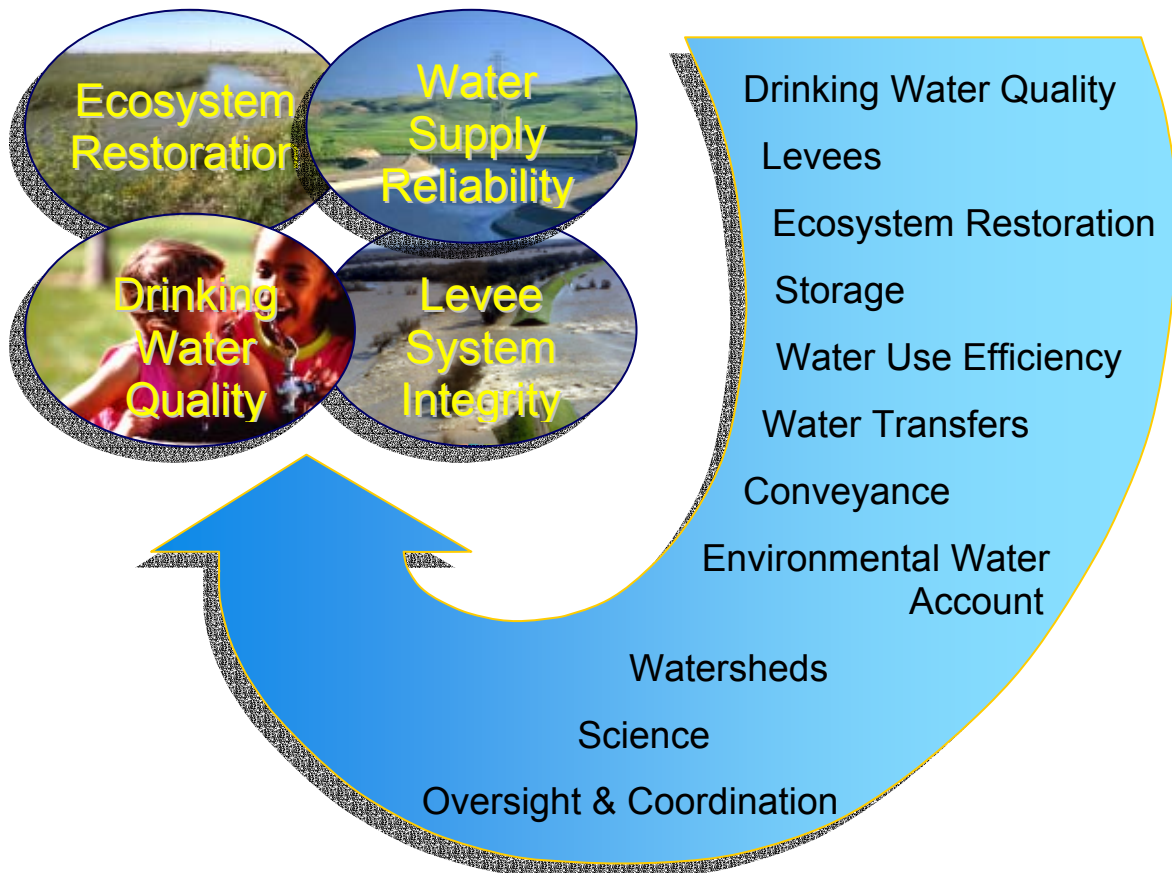
Committee Role

Paragraph 5 of the Committee's charter (see agenda item 2) lays out the duties, which include making recommendations on assessing Program performance, integration, priorities and coordination of Program actions to achieve balanced implementation. Section 79460 of the Bay-Delta Authority Act authorizes the Committee to advise and make recommendations on the Program and any of the processes and projects. In addition, the Committee adopted balanced implementation of the Program as a 2003 priority.

Attachments:

- Attachment 1 – Multi-Year Goals and Accomplishments
- Attachment 2 – Year 1-3 and Year 4 Funding
- Attachment 3 – Chapter 7 Proposition 50 Funding

Multi-Year Goals & Accomplishments



August, 2003

As Approved on August 14, 2003, by:



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Drinking Water Quality Goals and Objectives



Goals of the Program and Record of Decision Commitments

The Drinking Water Quality Program (DWQP) goal is to provide safe, reliable, and affordable drinking water to the 22 million Californians who rely on the Delta for all or part of their drinking water. To reach this goal, DWQP actions combine cost-effective improvements in source water quality, advancements in treatment technology, and innovations in water management.

Work has progressed on all of the Record of Decision commitments with emphasis on source water improvement and treatment technologies. The Drinking Water Subcommittee (DWS) of the Bay-Delta Public Advisory Committee has developed a framework for drinking water quality management stemming from discussion of the ROD water quality targets. This framework is captured in the “Equivalent Level of Public Health Protection Draft Decision Tree” (ELPH diagram) named for the language in the ROD (see detailed Program Plan). The ELPH diagram shows the broad range of actions and factors that can affect drinking water quality.

Following the ELPH diagram, the accomplishments and activities of the program are grouped into five categories:

- Improving Delta Water (includes Source Improvement, Conveyance/Delta Operations, and Storage)
- Improving Imported Water (includes CVP/SWP Operations and Storage south of Delta and Source Water Exchanges outside of the Delta)
- Improving Local Sources
- Treatment Options
- Program Management (includes Monitoring/Assessment, Implementation Commitments, and Subcommittee support)

Water Quality Program Highlights (Years 1-3)



\$34 M invested in 21 Drinking Water Quality projects for:

- Source Protection
- Water Management
- Treatment Technology

Significant progress addressing

- North Bay Aqueduct water quality
- San Joaquin Valley agricultural drainage

Developing a better understanding of:

- treatment technologies
- pollutant sources
- source improvement options
- water management and water quality

'ELPH' concept and diagram

Specific Accomplishments

Improving Delta Water

- **North Bay Aqueduct Alternative Intake Study:** Evaluated relocation of aqueduct intake as part of 2001 DWQP grant.
- **North Bay Aqueduct Watershed Study:** A Proposition 204 grant to evaluate watershed management on Barker Slough has been completed. The project involved monitoring water quality and developing and implementing pilot Best Management Practices (BMPs).
- **Delta Water Quality Modeling:** The DWR Delta Modeling Section with support from the DWQP has completed a number of studies of Delta water quality resulting from various conveyance and storage alternatives.
- **CVRWQCB Basin Plan Amendment (salinity and boron):** The draft BPA was circulated for public review.

- **DWR Agricultural Drainage Program (salinity and selenium):** Includes management and coordination, monitoring and evaluation, on-farm drainage reduction, treatment, integrated drainage management and environmental investigations.
- **Real Time Monitoring and Management of Salinity:** The Regional Board, DWR, and Lawrence Berkeley National Laboratory in cooperation with the USGS and local water districts, implemented a real-time monitoring and modeling program for salinity in the San Joaquin River. Flow and salinity were monitored, and salt load and salt assimilative capacity were modeled, for three years through December 2002.

Improving Imported Water

- **Sanitary Surveys:** DWR completed the sanitary survey of the State Water Projects and its tributaries. DWR also conducted water quality sampling of run-off into the California Aqueduct and the South Bay Aqueduct.
- **Bay Area Water Quality and Supply Reliability Program:** This program is evaluating cooperative projects among Bay Area water districts to meet their water supply reliability and drinking water quality objectives. Phase 1 evaluated overall Bay Area water quality, developed a list of potential projects and provided a qualitative evaluation of the ability of existing infrastructure to provide sufficient high quality water to meet the drinking water objectives in the ROD.
- **San Joaquin Valley / Southern California Water Quality Exchanges –** Metropolitan Water District (MWD) has entered into two partnerships with San Joaquin Valley water agencies to explore water management opportunities to help resolve water supply and water quality management problems.
- **Operational Improvements/ Recirculation in the San Joaquin River:** US Bureau of Reclamation and DWR have completed the modeling studies, which are undergoing management review. The reports will then be forwarded to the fisheries agencies for a preliminary fish and wildlife evaluation.

Improving Local Sources

- This program element was added only recently. Implementation will begin in Year 4.

Treatment Options

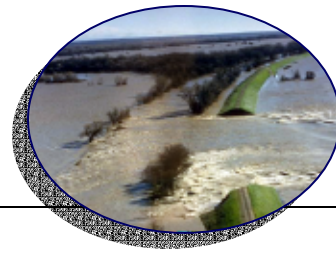
- **Ultraviolet (UV) Light Disinfection:** A CALFED grant for \$161,000 was awarded to MWD to study integration of UV disinfection with treatment oxidants.
- **Ion Exchange for Organic Carbon Removal:** The DWQP awarded a grant to Solano County Water Agency to investigate application of innovative ion exchange technology for organic carbon removal. Bench scale studies are under way to be followed by a pilot scale system.
- **Regional Desalination:** Agricultural drainage water recycling using membrane technology by Panoche Drainage District (CALFED grant). The project will begin in Year 4.

- **Desalination Research and Innovation Partnership (DRIP):** A MWD project intended to demonstrate innovative desalination technologies to treat a variety of brackish and high salinity wastewaters. The program has already resulted in the development of advanced reverse osmosis (RO) membranes.

Program Management

- **Monitoring and Assessment:** CALFED Monitoring and Assessment Program (MAP): Identified existing monitoring programs, funded 15 monitoring and assessment projects for \$8 million.
- **2001 CALFED Drinking Water Quality Program Grants:** The DWQP awarded grants for 13 projects totaling \$6.7 million. Emphasis in this first PSP was on monitoring and assessment.
- **2002 State Water Resources Control Board RFP:** The SWRCB with the DWQP taking the lead on the selection process awarded grants for 13 projects totaling \$7.2 million in Prop 13 nonpoint source funds. Seven of these projects related to agriculture in the San Joaquin Valley.

Levee Program Goals and Objectives



Goal of the Program and Record of Decision Commitments

The goal of the Levee System Integrity Program is to provide long-term protection for multiple Delta resources by maintaining and improving the integrity of the extensive Delta levees system. These efforts are being undertaken in a manner consistent with the Ecosystem Restoration Program and Conveyance Program.

The CALFED Record of Decision (ROD) identified five commitments to be met. For each ROD commitment, key objectives have been identified for the Levee System Integrity Program:

Provide Base Level Protection.

- Provide funding to help local reclamation districts reconstruct all Delta levees to a base level of protection (the PL 84-99 standard).

• Implement Special Improvement Projects.

- Identify projects that will enhance flood protection beyond that provided by base level standard, necessary for identified public benefits including life and personal property protection, water quality, protecting agricultural production, and protecting ecosystems.

• Implement a Levee Subsidence Control Plan.

- Develop “best management practices” to correct subsidence adjacent to levees.
- Coordinate research to quantify effects and extent of inner-island subsidence.

• Implement a Levee Emergency Management and Response Plan.

- Enhance the ability of local, State, and Federal agencies to rapidly respond to levee emergencies.

• Perform a Delta Levee Risk Assessment.

- Perform a risk assessment to quantify the major risks to Delta resources from floods, seepage, subsidence and earthquakes, evaluate the consequences, and develop recommendations to manage the risk.

Levee Program Highlights (Years 1-3)



Specific Accomplishments

Provide Base Level Protection

- Improved 40 levee miles up to the PL 84-99 standard, including projects on Sherman, Bradford, and Jersey Islands and Webb Tract.

Implement Special Improvement Projects

- Continued work on developing general permit terms and conditions with the Regional Water Quality Control Board (RWQCB) for dredging projects less than 100,000 cubic yards.
- Reused over 650,000 cubic yards of dredge material to increase levee stability and habitat enhancement.
- Initiated efforts to amend the Suisun Marsh Preservation Agreement and develop a long-term plan for levee protection consistent with regulatory permit requirements and endangered species protection.
- Complete the Suisun Marsh Levee Investigation, which will be considered when the Suisun Marsh is evaluated for inclusion in the Levee System Integrity Program.

Implement a Levee Subsidence Control Plan

- Initiated a demonstration project on Twitchell Island to determine relationships between biomass accumulation, sediment deposition, and water management and to delineate priority areas on the island for subsidence control.
- Developed the Strategic Framework for Reversing the Effects of Subsidence in the Sacramento-San Joaquin Delta for guiding future broad-scale study of subsidence solutions.
- The Suisun Marsh Charter process is developing conceptual models that identify current and potential land management opportunities that may reduce ongoing subsidence. In addition, Amendment 2b of the Suisun Marsh Preservation Agreement (SMPA) includes a water management program that could also provide valuable data for modifying land management that would reduce subsidence and provide for sustainable wetland management.

Implement a Levee Emergency Management and Response Plan

- Coordinated with three levee maintaining agencies (LMAs) and provided funds for emergency measures to prevent overtopping of the Van Sickle Island levee during high tide and high wind conditions.
- Provided emergency funding to control excessive seepage and levee erosion on Brannan Island.
- Provided funding to restore integrity to the Empire Tract levee that was subject to excessive seepage and erosion.

Perform a Delta Levee Risk Assessment

- Developed Statement of Work to perform initial Risk Management Analysis study.

Ecosystem Restoration Program Goals and Objectives



The Ecosystem Restoration Program (ERP) is designed to (1) maintain, improve, and increase aquatic and terrestrial habitats and improve ecological functions in the San Francisco Bay and Sacramento-San Joaquin Delta (Bay-Delta) to support sustainable populations of diverse and valuable plant and animal species; (2) achieve recovery of at-risk species dependent on the Delta and Suisun Bay; and (3) support the recovery of at-risk species in San Francisco Bay and in the watershed above the estuary. The ERP is essential to sustaining environmental regulatory compliance across all Bay-Delta Program elements.

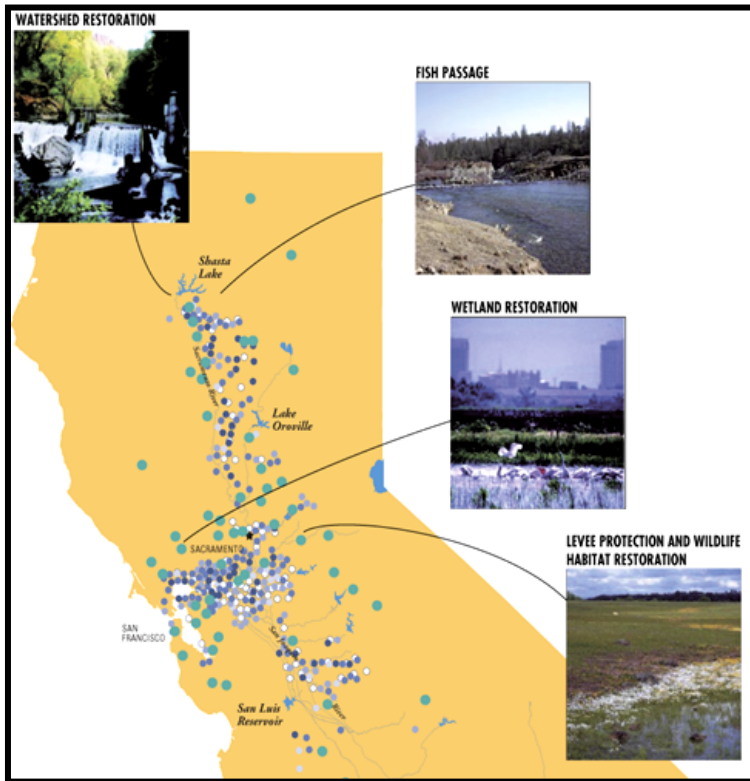
The CALFED Programmatic Environmental Impact Statement/Report identified six strategic goals for ERP to meet. For each goal, strategic objectives were identified. A summary of the goals and objectives follow.

- **Recover endangered and other at-risk species and native biotic communities.**
 - Achieve recovery and then sustain large populations of specific at-risk native species in the Delta, Suisun Bay and Marsh. Recover and sustain specific native at-risk species in the Bay-Delta estuary and its watershed
 - Enhance or conserve native biotic communities in the Bay-Delta estuary and its watershed
 - Maintain the abundance and distribution of specific native species
- **Rehabilitate ecological processes.**
 - Establish and maintain hydrologic and hydrodynamic regimes for the Bay and Delta that support the recovery and restoration of native species and biotic communities, restore and maintain functional natural habitats, and maintain harvested species
 - Increase estuarine productivity and rehabilitate estuarine food web processes to support recovery and restoration of native estuarine species and biotic communities
 - Rehabilitate natural processes to create and maintain complex channel morphology, in-channel islands, and shallow water habitat in the Delta and Suisun Marsh
 - Create and maintain flow and temperature regimes in rivers that support the recovery and restoration of native aquatic species
 - Establish hydrologic regimes in streams to maintain channel and sediment conditions supporting the recovery and restoration of native aquatic and riparian species and biotic communities

- Reestablish floodplain inundation and channel-floodplain connectivity of sufficient frequency, timing, duration, and magnitude supporting restoration and maintenance of functional natural floodplain, riparian, and riverine habitats
- Restore coarse sediment supplies to sediment-starved rivers downstream of reservoirs to support restoration and maintenance of functional natural riverine habitats
- Increase meandering reaches and other pre-1850 river channel characteristics
- **Maintain or enhance harvested species populations.**
 - Enhance fisheries for salmonids, white sturgeon, pacific herring, and native cyprinid fishes
 - Maintain fisheries for striped bass, American shad, signal crayfish, grass shrimp, and nonnative warm-water game fishes to the extent consistent with ERP goals
 - Enhance populations of waterfowl and upland game for harvest by hunting and for non-consumptive recreation to the extent consistent with ERP goals
 - Ensure that Chinook salmon, steelhead, trout, and striped bass hatchery, rearing, and planting programs do not have detrimental effects on wild populations of native fish species and ERP actions
- **Protect and restore habitats.**
 - Implement and manage restoration actions for all major habitat types to provide connectivity among habitats, in the Delta, Suisun Bay, Suisun Marsh and San Francisco Bay
 - Implement and manage restoration actions for all major habitat types to provide connectivity among habitats, in the Central Valley and its rivers
 - Protect tracts of existing high quality major aquatic, wetland, and riparian habitat types, and sufficient connectivity among habitats in the Bay-Delta and its watershed
 - Minimize agricultural land conversion and maintain open space buffers and encourage wildlife friendly agriculture
 - Manage the Yolo and Sutter Bypasses as major areas of seasonal shallow water habitat to enhance native fish and wildlife
- **Prevent establishment of and reduce impacts from non-native invasive species.**
 - Eliminate further introductions or halting introductions of non-native species from ship ballast into the Bay-Delta estuary
 - Eliminate further introductions of new species from imported marine and freshwater baits into the Bay-Delta estuary and its watershed.

- Halt the unauthorized introduction and spread of potentially harmful non-native introduced fish species or other aquatic organisms in the Bay-Delta and Central Valley
- Halt release of non-native introduced fish and other aquatic organisms from private aquaculture, aquarium and pet trades into the Bay-Delta estuary, its watershed, and other central California waters
- Reduce the impact of non-native mammals on native birds, mammals, and other organisms
- Limit the spread or eradicate populations of non-native invasive species through focused management efforts
- Prevent a zebra mussel invasion into California
- **Improve or maintain water and sediment quality.**
 - Reduce loadings and concentrations of toxic contaminants in all aquatic environments in the Bay-Delta estuary and its watershed
 - Reduce loadings of oxygen-depleting substances from human activities into aquatic ecosystems in the Bay-Delta estuary and its watershed
 - Reduce fine sediment loadings from human activities into rivers and streams

Ecosystem Restoration Program Highlights (Years 1-3)



- **Single blueprint approach**
- **393 ecosystem projects funded for about \$460 million**
- **97,000 acres of habitat protected or restored**
- **75 new or improved fish screens**
- **23 comprehensive scientific studies**
- **Contributed to meeting regulatory commitments for all Program elements**

Specific Accomplishments

Since its inception nearly seven years ago, the ERP facilitated funding for a variety of projects contributing to ecosystem restoration within the ERP's geographic scope. ERP investments contributed to sustaining regulatory assurances for all Bay-Delta Program elements in Years 1 through 3. There are at least three ways that ERP can assess its accomplishments: (1) tracking funding allocations (the focus of this discussion); (2) tracking progress toward targets; and (3) tracking progress toward specific goals or objectives. Work continues in all three areas, however, current assessment tends to focus on the funding allocations, and the ensuing discussion focuses on this approach. Currently, ERP is beginning to address how to measure progress toward targets as part of an ongoing "look back" exercise. The ERP is also in the process of identifying indicators to track progress toward specific goals and objectives. Because implementing restoration projects takes time, and because of the nature of ecosystem restoration, the ERP is approaching a time when it can now begin to identify and articulate the results of some of its projects.

Listed below is a breakdown of the 393 projects by ERP goal that have been funded as of June 2003. Because many ERP projects address more than one of the Strategic Goals, the following project numbers and percentages total more than 100 percent and more than the total of 393 projects that were funded through June 2003.

Goal 1: Recover Endangered and Other At-Risk Species and Native Biotic Communities

About 63 percent, 253 projects, address recovering endangered and other at-risk species and native biotic communities.

Goal 2: Rehabilitate Ecological Processes

About 57 percent, 229 projects, address rehabilitating ecological processes.

Goal 3: Maintain or Enhance Harvestable Species Populations

About 13 percent, 53 projects address maintaining or enhancing harvestable species populations.

Goal 4: Protect and Restore Habitats

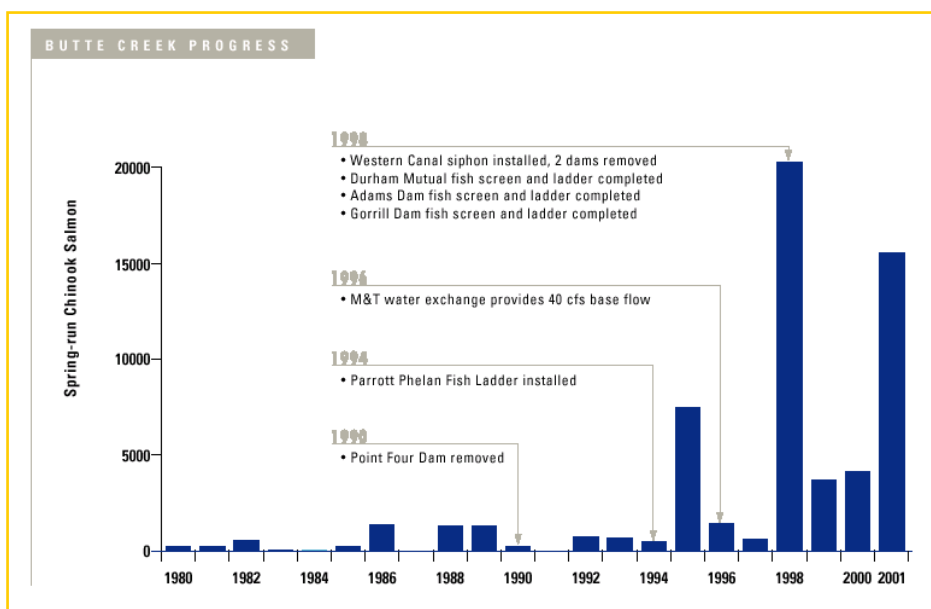
About 57 percent, 224 restoration projects, address protecting and restoring habitats.

Goal 5: Prevent Establishment of and Reduce Impacts from Non-Native Invasive Species

About 10 percent, 31 projects, address preventing establishment of or reducing impacts from non-native invasive species.

Goal 6: Improve or Maintain Water and Sediment Quality

About 30 percent, 117 projects, address improving or maintaining water and sediment quality.



Returns of
Spring-Run
Chinook
Salmon on
Butte Creek

Water Supply Reliability Goals and Objectives



Storage Program and Record of Decision Commitments

The goal of the Storage Program is to expand storage capacity to increase operational flexibility and water supply reliability in an effort to improve water quality and support fish restoration efforts.

The CALFED Record of Decision (ROD) identified six commitments to be met. For each ROD commitment, key objectives have been identified for the Storage Program:

Development of approximately 250 TAF of In-Delta Storage

- Provides fishery benefits and enhances water project flexibility
- Could be achieved through implementation of a re-engineered in-Delta storage project that will meet the ecosystem needs in the Delta and provide water supply reliability
- State and Federal agencies will make a decision regarding the feasibility of an In-Delta storage project and the appropriateness of initiating negotiations with Delta Wetlands owners or other appropriate landowners for acquisition of necessary property
- State and Federal agencies will develop a project plan that addresses local concerns regarding effects on neighboring lands and complete any additional needed environmental documentation

Enlargement of Shasta Lake storage by approximately 300 TAF

- Increases the pool of cold water available to maintain lower Sacramento River temperatures needed by anadromous fish
- Provides other water management benefits, such as water supply reliability
- To the extent possible, includes features to benefit other identified ecosystem, flood control, and related water resources needs

Expansion of Los Vaqueros Reservoir by up to 400 TAF

- Provides water quality and water supply reliability benefits to Bay Area water users
- Department of Water Resources (DWR) and U.S. Bureau of Reclamation (USBR) are working with Contra Costa Water District (CCWD) and interested stakeholders to assure that previous commitments, including local voter approval required for expansion, are respected

Development of up to 1.9 MAF of North-of-the-Delta Offstream Storage

- Enhances water management flexibility in the Sacramento Valley while reducing diversions on the Sacramento River during critical fish migration periods
- Increases reliability of supplies for a significant portion of the Sacramento Valley
- Provides storage and operational benefits for other California Bay-Delta Programs, including water quality and the Environmental Water Account

Development of 250 TAF to 700 TAF of Storage in the Upper San Joaquin River Basin

- Contributes to restoration of and improved water quality for the San Joaquin River
- Facilitates conjunctive management and water exchanges that improve the quality of water deliveries to urban communities
- Improves CVP water supply reliability south of the Delta
- Increases flood protection in the San Joaquin Valley
- Increases power generation

Groundwater Conjunctive Management Projects with Total Capacity of 500 TAF to 1 MAF

- Increases water supply reliability statewide through the planned, coordinated local management and use of groundwater and surface water resources
- Develops a basic understanding of individual groundwater basins
- Identifies basin management strategies and objectives
- Plans and conducts groundwater studies
- Designs and constructs conjunctive use projects

Each of these commitments is being assessed individually and in coordination with one another to ensure consistent assumptions, review, and coordination with other California Bay-Delta Program goals.

Water-Use Efficiency Program and ROD Commitments

The goal of the Water Use Efficiency (WUE) Program is to advance the implementation of cost-effective water conservation and recycling practices throughout the State that contribute to California Bay-Delta Program water supply reliability, water quality, and ecosystem restoration goals. These practices include agricultural water conservation, urban water conservation, water recycling, and wetlands water management.

The CALFED Record of Decision (ROD) identified several WUE commitments which fall into four broad implementation categories:

- **Assurances, Science, Monitoring, and Evaluation**
 - Provide credible assurances to policy-makers and stakeholders that the WUE Program is being implemented aggressively and in accordance with the ROD.

- Support and inform sound water management decisions.
- Verify results of WUE actions.
- Develop quantified performance measures (including agricultural quantifiable objectives).
- Engage in adaptive management.
- **Water Conservation and Recycling Loans and Grants**
 - Facilitate implementation of WUE actions at the local level – by cities, water suppliers, and farmers.
 - Use state and federal grants to help local entities implement WUE practices that are not locally cost effective but still contribute to California Bay-Delta objectives.
 - Use state and federal low interest loans to help local entities overcome financial barriers to WUE implementation.
- **Water Conservation and Recycling Technical Assistance**
 - Provide technical assistance to help local entities overcome technical hurdles in recycling water.
 - Support and provide outlets for scientific research, public awareness on water recycling production and use.
 - Develop partnerships with local and regional entities to: (1) assess the costs, benefits, and feasibility of potential WUE projects; (2) determine the best approach to implement WUE actions; (3) effectively prepare grant and loan applications; and (4) comply with WUE reporting requirements (e.g. related to urban water conservation certification).
- **Oversight and Coordination**
 - Provide guidance to WUE implementing agencies in interpreting the ROD.
 - Employ methods of informal communications, such as staff-level meetings and conference calls with agency staff dissemination of information.
 - Engage in formal communications as necessary, such as reports to the California Bay-Delta Authority, the Bay-Delta Public Advisory Committee, and the WUE Subcommittee.

Water Transfer Program and ROD Commitments

The goal of the Water Transfer Program is to encourage the development of a more effective water transfer market that facilitates water transfers and streamlines the approval process while protecting water rights, environmental conditions, and local economic interests.

The CALFED Record of Decision (ROD) identified three commitments to be met. For each ROD commitment, key objectives have been identified for the Water Transfer Program:

- **Increase the availability of existing facilities for water transfers.**
 - Improve capacity estimates of state or federal conveyance facilities.
 - Improve predictability of associated wheeling costs.
 - Develop a mechanism for estimating carriage water requirements on a real-time basis.
 - Develop rules for reservoir refill.
- **Lower transaction costs through permit streamlining.**
 - Identify measures to streamline transfer approval processes of jurisdictional agencies.
 - Continue defining transferable water associated with crop idling.
 - Identify potential impacts to third-parties and develop mechanisms for appropriate compensation.
- **Increase availability of market information to stakeholders and permitting agencies.**
 - Continued operation of the On-Tap database and Water Transfer Information Clearinghouse.

Conveyance Program and ROD Commitments

The goal of the Conveyance Program is to identify and implement water conveyance modifications in the Delta that will:

- Improve water supply reliability for in-Delta and export users
- Support continuous improvement in drinking water quality
- Complement Delta ecosystem

The CALFED Record of Decision (ROD) identified three commitments to be met. For each ROD commitment, key objectives have been identified for the Conveyance Program:

- **South Delta Actions** – to increase State Water Project (SWP) and Central Valley Project (CVP) export capability, improve the Delta ecosystem through fish protective measures, and ensure that local in-Delta agricultural water needs are met.
 - Increase SWP pumping from the current limit to 8,500 cubic feet per second (cfs) from March 15 to December 15, and modify existing pumping criteria from December 15 to March 15, to allow greater use of SWP export capacity and the installation of permanent operable barriers in the south Delta.
 - Increase SWP pumping to the maximum capability of 10,300 cfs.
 - Increase fish protection by improving fish screening at CVP and SWP export facilities.
 - Design and construct floodway improvements on the lower San Joaquin River to provide conveyance, flood control and ecosystem benefits.
 - Reduce agricultural drainage from Veale and Byron Tracts in the Delta.
- **North Delta Actions** – to improve flood protection and conveyance facilities, water quality, Delta fisheries, and avoid water supply disruptions, to increase the water supply reliability for the SWP and CVP and to enhance the Delta ecosystem.
 - Evaluate and implement improved operational procedures for the Delta Cross Channel (DCC) to address fishery and water quality concerns.
 - Simultaneously evaluate a screened through-Delta facility on the Sacramento River of up to 4000 cfs.
 - Design and construct floodway improvements in the North Delta to provide conveyance, flood control, and ecosystem benefits.
- **Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions** – to consider the need for two specific DMC/CA intertie projects which physically connect the SWP and CVP facilities.
 - One connection would occur between the Delta Mendota Canal and California Aqueduct west of the City of Tracy.
 - One connection would be an intertie between the CVP intake facility and the SWP's Clifton Court Forebay with a corresponding increase in the capacity of the Forebay's screened intake.
- **Complimentary Actions** – objectives that were not analyzed in the final Programmatic EIS/EIR.
 - The Temporary Barriers Project will seasonally install up to three rock flow control structures and one rock fish control structure in south Delta channels at various times through 2007, or until permanent flow control structures are constructed under the South Delta Improvements Program (SDIP).

- Take additional actions to protect navigation and protect local diverters in the South Delta who are not adequately protected by temporary barriers as part of the Temporary Barriers Project.
- Evaluate a bypass to the San Felipe Unit at the San Luis Reservoir to increase the operational flexibility of storage in San Luis Reservoir and ensure a high quality, reliable water supply for San Felipe Division contractors potentially at risk due to “low point” water levels in the San Luis Reservoir.
- Facilitate water quality exchanges and similar programs to make high quality Sierra Nevada water in the eastern San Joaquin Valley available to urban Southern California interests.
- Implement a Sacramento and San Joaquin Comprehensive Study to improve the flood control efforts from the Sacramento and San Joaquin Rivers out to the San Francisco Bay.

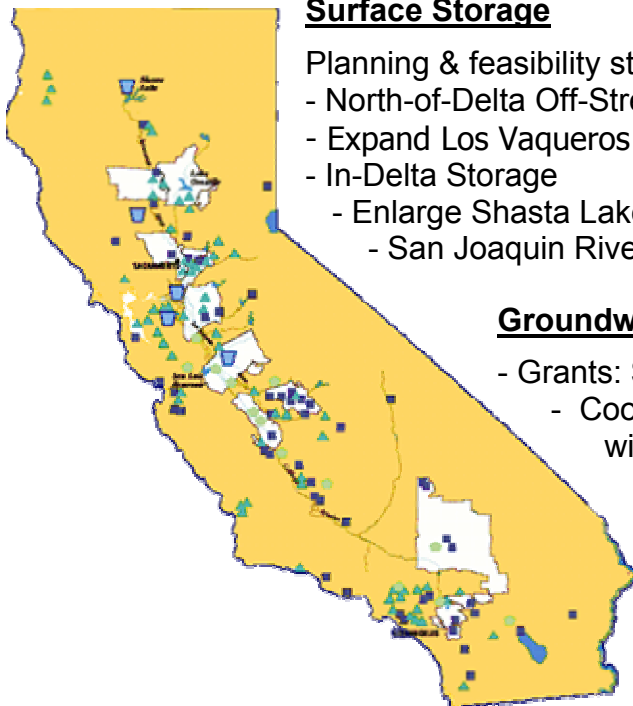
Environmental Water Account and ROD Commitments

The Environmental Water Account (EWA) has been established to provide water for the protection and recovery of at-risk fish species beyond water available through existing regulatory actions related to the operations of the State Water Project (SWP) and the Central Valley Project (CVP). EWA’s purpose is to provide protection to the at-risk fish species of the Bay-Delta estuary through environmentally beneficial changes in SWP/CVP operations at no uncompensated water cost to the projects’ water users. This approach to fish protection requires the acquisition of alternative sources of project water supply, called the “EWA assets,” that are to be used to augment streamflows, Delta outflows, to modify exports, to provide fishery benefits, and to replace the regular project water supply interrupted by the changes to project operations.

The CALFED Record of Decision (ROD) provided a commitment, subject to specified conditions and legal requirements, that for the first four years of Stage 1, there will be no reductions, beyond existing regulatory levels, in CVP or SWP Delta exports resulting from measures to protect fish under Federal or State endangered species acts. This commitment is based on the availability of three tiers of assets:

- Tier 1 is baseline water. The regulatory baseline consists of the biological opinions on winter-run salmon and delta smelt, 1995 Delta Water Quality Control Plan, and 800 TAF of CVP Yield pursuant to CVPIA Section 3406(b)(2).
- Tier 2 consists of the assets in the EWA combined with the benefits of the ERP and is an insurance mechanism that will allow water to be provided for fish protection and recovery when needed, without reducing deliveries to water users.
- Tier 3 is based upon the commitment and ability of the State and Federal Agencies to make additional water available should it be needed. In March 2002, the State and Federal Agencies prepared an implementation strategy for Tier 3, establishing a timely scientific panel process and identifying tools and funding should implementation of Tier 3 prove needed.

Water Reliability Program Highlights (Years 1-3)



Surface Storage

Planning & feasibility studies:

- North-of-Delta Off-Stream Storage
- Expand Los Vaqueros Reservoir
- In-Delta Storage
 - Enlarge Shasta Lake
 - San Joaquin River

Groundwater Storage

- Grants: \$170M (200 TAF/yr)
- Cooperative Agreements with local agencies

Water Use Efficiency

- Conservation: Grants \$59M (41 TAF/year)
- Recycling: Grants \$57M (36 TAF/year)

Specific Accomplishments – Storage

Development of 250 TAF of In-Delta Storage

- DWR and USBR completed a joint planning study, including pre-feasibility evaluation of alternatives.
- Released the In-Delta Storage Program Draft Summary Report and supplemental reports on operations, water quality, engineering, environmental and economic evaluations in May 2002.
- DWR and USBR continued technical studies of risk, design, operations, water quality, environmental impacts, benefits, and costs. Revised studies are scheduled for completion by June 30, 2003.

Enlargement of Shasta Lake Storage by 300 TAF

- State and Federal agencies concurred to continue with planning studies to evaluate if the proposed Shasta Lake enlargement would impact the Wild and Scenic reach of the McCloud River.
- Initiated feasibility study.

- Identified potential impacts and evaluating alternatives to avoid/mitigate impacts on the McCloud River.

Expansion of Los Vaqueros Reservoir by up to 400 TAF

- Identified potential local partners and developed agreements with CCWD and other stakeholders for necessary studies. Signed a Memorandum of Understanding (MOU).
- Initiated feasibility study.
- Completed a Draft Project Concept Report (pre-feasibility) and Executive Summary.
- Conducted initial public meetings.

Development of up to 1.8 MAF of North-of-the-Delta Offstream Storage

- Signed a joint planning MOU by 12 local water agencies and counties and five state and federal agencies.
- Filed the Notice of Preparation (NOP) at the State Clearinghouse.
- Published the Notice of Intent (NOI) in the Federal Register.
- Completed public and tribal scoping.
- Completed and released a scoping report.
- Initiated CALSIM II modeling runs of preliminary operations scenarios.
- Began work on the environmental documentation and engineering feasibility study.

Development of 250 to 700 TAF of storage in the Upper San Joaquin River Basin

- Identified surface storage options that could contribute to program objectives.
- Completed preliminary operation studies for single-purpose analysis for identified surface storage options.
- Completed a Draft Phase I in-progress report including appraisal level evaluations of surface storage alternatives.
- Held 5 public stakeholder workshops to encourage participation by interested parties in the formulation and evaluation of alternatives.
- Initiated a feasibility study.

Groundwater Conjunctive Management Projects with Total Capacity of 500 TAF to 1 MAF

- Executed an MOU with 30 local agency partners and provided technical and financial assistance to study the groundwater basins and assess opportunities for conjunctive water management.
- Provided technical and financial assistance to local partners for assessing in-basin needs, development of basin-wide planning and management strategies, project formulation, and commencement of pilot projects.

- Provided independent facilitation/mediation services to local partners to improve stakeholder involvement, foster local support for improved groundwater management, and to enhance stakeholder understanding of water resource issues and needs.
- Coordinated conjunctive water management activities in the Central Valley with the North-of-the-Delta Offstream Storage and Upper San Joaquin River Basin Storage investigations.
- Awarded \$18.5 million of Water Bond 2000 (Proposition 13) funds in Year 1 and \$500,000 in Year 2 to conduct feasibility and pilot studies. Awarded 15 grants and loans totaling \$102.7 million for construction projects in Year 2. The estimated average annual yield of the funded projects is 130 TAF.
- Awarded \$5 million of Local Groundwater Management Assistance Act (AB 303) grants to local agencies for 23 groundwater studies and projects in Year 1. Awarded 21 grants totaling \$4.4 million in Year 2.
- Provided input on SB 1938, which requires, effective 1/1/03, adoption of groundwater management plans with specific components if agencies seek funding administered by DWR for groundwater projects.

Specific Accomplishments – Water Use Efficiency

Assurances, Science, Monitoring, and Evaluation

- Developed a staff draft Framework for Certification of Urban Best Management Practices (BMP) through an ad hoc stakeholder process. (Led by the California Bay-Delta Authority (CBDA); participation by DWR, SWRCB & USBR.)
- Developed and adopted the Agricultural Milestones, a process to evaluate the regional progress of agricultural water conservation and identify barriers to implementation. (Led by CBDA; participation by DWR & USBR.)
- Made progress on a draft definition of appropriate urban and agricultural water use measurement (including surface and groundwater). (Led by CBDA; participation by DWR & USBR.)
- Made progress on developing quantified WUE performance measures. Worked with the Agricultural Water Management Council to incorporate agricultural Quantifiable Objectives into the economic evaluation process for selecting agricultural efficient water management practices. (Jointly led by DWR and CBDA.)
- Worked with the Science Program to develop Science Application Advisory Committee to ensure that WUE-related work is practical while still based upon the best available science. Incorporated concepts from the Science Application Advisory Committee into the 2004 WUE Proposal Solicitation Package to improve the monitoring and evaluation of WUE projects. (Led by DWR; participation by USBR and CBDA.)

- Developed the scope of the WUE independent Science Review Panel and began recruiting panelists. (Led by CBDA; participation by DWR, USBR, and SWRCB.)

Water Conservation and Recycling Loans and Grants

- Provided financial incentives for water use efficiency by issuing sixty-nine urban water conservation grants and 23 agricultural water conservation grants for a total of 40,775 acre-feet estimated annual water savings and an expected total water savings of 754,621 acre-feet from 2001-2003. (Led by DWR; in coordination with USBR and CBDA.)
- Facilitated a water recycling stakeholder workshop. Approved a \$1 million grant to the WaterReuse Foundation to conduct water recycling research in 11 specified areas in 2001. Approved amendment to existing WaterReuse Foundation contract and increased the contract amount to an additional \$1 million in 2003. (Led by SWRCB, participation by DWR & CBDA.)
- Issued \$13,569,000 in grants to water suppliers through the Water Conservation Field Services Program. (Led by USBR.)
- Reserved \$600,000 of water recycling research funds for the facilitation of Recycled Water Task Force. Work will be completed June 30, 2003 with submittal of final report to the legislature. (Jointly led by SWRCB and DWR.)
- Awarded six water recycling loans totaling \$72 million and committing all water recycling construction loan funds, including 1984 Bond law funds. Additionally, \$20 million of State Revolving Loan funds have been committed for water recycling projects. Projects receiving loan funding contribute to a proposed increase of 36,000 acre-feet per year of recycled water. Awarded 20 water recycling grants to local agencies totaling \$57 million, the total amount of water recycling construction grant funds available from Proposition 13 (includes remaining Proposition 204 funds). Projects receiving loan funding contribute to a proposed increase of 36,000 acre-feet per year of recycled water. (Led by SWRCB.)
- Made progress on developing an on-farm WUE incentive program. Held six meetings throughout the central valley to gather input from producers and others regarding the kind and administration of programs that would be of value. A final proposal will be presented to WUE in September 2003. (Led by NRCS.)

Water Conservation and Recycling Technical Assistance

- Continued to provide technical, biophysical, and engineering-oriented knowledge on water recycling and desalination issues in collaboration with the State Water Resources Control Board (SWRCB) and Department of Health Services (DHS), formed and implemented California Recycled Water Task force called for by Assembly Bill No. 331 (Goldberg). The Task Force created 6 different workgroups to tackle issues of concern. Organized 28 separate open meetings of the Task Force and its workgroups, developed 6 white papers, and prepared the draft final Task Force report. (Led by DWR.)
- Provided financial assistance to help start two new Mobile Laboratories in Tehama and Siskiyou counties. Provided financial assistance to an existing Mobile

Laboratory in Kern County to provide 25 evaluations per year outside their service area. (Led by DWR.)

- Reprinted and disseminated several water use efficiency brochures, articles and the Water Conservation News. (Led by DWR.)
- Assisted local agricultural water agencies to install seven new CIMIS weather stations. Collected, processed, analyzed, and disseminated CIMIS data and provided trouble-shooting assistance to maintain the system and resolve problems with cooperator CIMIS weather station. Contracted with the Center for Irrigation Technology for On-farm Drainage Reduction, including four workshops per year. Participated with the California Rural Water Association to present three workshops related to agricultural water conservation and irrigation. Partnered with the University of California Cooperative Extension to conduct 6 workshops on irrigation scheduling, and promoted the agricultural loan program during 6 Drought Preparedness Workshops. CIMIS participated in several workshops throughout the State to inform the public about the CIMIS program, how to utilize CIMIS data, and how to become a CIMIS cooperator. (Led by DWR.)
- Conducted urban water management plan workshops, provided technical assistance to the California Urban Water Conservation Council, published the Draft Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001, and conducted workshops on those bills throughout California. (Led by DWR.)
- Facilitated technical assistance to water suppliers and water users through the Water Conservation Field Services program (see Loans and Grants, above). (Led by USBR.)
- Established criteria for Refuge Water Management Plans and incorporated agricultural Quantifiable Objectives on Wetlands. (Led by USBR.)
- Provided technical assistance to growers throughout the state for the adoption of new irrigation equipment and improved water management techniques. (Led by NRCS.)

Oversight and Coordination

- Provided guidance to WUE agencies in interpreting the ROD and facilitated communications. Convened the WUE Subcommittee to the BDPAC. (Led by CBDA.)

Specific Accomplishments – Water Transfers

Increase the Availability of Existing Facilities for Water Transfers.

- Developed and implemented an approach to determining carriage water requirements for transfers on a real-time basis. This process was developed in coordination with the Bay-Delta Modeling Forum.
- Continued efforts to identify constraints and opportunities to convey transfer water through federal/state/local facilities.

Lower Transaction Costs Through Permit Streamlining.

- Participated in and contributed to preparing a series of papers addressing water transfers involving groundwater substitution and crop shifting/fallowing to serve as a standardized approach to evaluating transfer proposals and to assist transfer proponents in formulating proposals. These papers were developed with participation of the stakeholder community.
- Utilized the public involvement/stakeholder activities undertaken by the State Water Resources Control Board (SWRCB) in the development of the report “Water Transfer Issues in California” to identify opportunities to streamline the current permitting process.
- Coordinated with the SWRCB regarding identifying measures to be implemented that resulted from completing the stakeholder forum and the publication of the report titled Water Transfer Issues in California (SWRCB, 2002). The SWRCB is currently soliciting public comment on the applicable recommendations for subsequent SWRCB action.
- Continue to discuss and consider measures to streamline and expedite the various agency water transfer approval processes. These measures include:
 - Adopting a standard water transfer application.
 - Establish limits for processing transfer applications.
 - Establish suitable criteria for approving land idling-based transfers.
 - Clarify procedures for transfers for instream purposes under Water Code Section 1707.
- Provide financial and technical assistance for preparing groundwater management plans.
- Continued to work with the affected stakeholder community to encourage coordination of multiple transfers and identification of standard mitigation measures and thresholds to address third-party socioeconomic consequences.

**Increase Availability of Market Information
to Stakeholders and Permitting Agencies.**

- Developed a water transfer information and database titled “On-Tap”. Continued to operate the On-Tap website to facilitate information exchange regarding transfers and provide guidance regarding the regulatory approvals required by project proponents of various types of transfers.
- Department of Water Resources (DWR), SWRCB, and the U.S. Bureau of Reclamation (USBR) entered into a Memorandum of Understanding establishing their respective responsibilities for implementing the Water Transfers Information Clearinghouse.
- Implemented refinements to the On-Tap website consisting of updating the water transfer database to include current (April 2003) water transfer actions, developing and testing an on-line administrator, and developing an On-Tap User Guide and Website Manual (enabling the agencies to manage the website and database as future conditions warrant).
- Coordinated with the Environmental Justice (EJ) Program to identify and characterize third-party impacts resulting from water transfers. This effort included conducting interviews with selected members of the EJ community who demonstrated interest and concern toward water transfer impacts on third-parties.

Specific Accomplishments - Conveyance

South Delta Actions – to increase State Water Project (SWP) and Central Valley Project (CVP) export capability, improve the Delta ecosystem through fish protective measures, and ensure that local in-Delta agricultural water needs are met.

8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program):

- Continued preparation of preliminary designs and the production of the Action Specific Implementation Plan (ASIP), a science symposium on the findings of the ASIP, public review of the EIR/EIS, and selection of a preferred alternative along with the CALFED Mid-Stage 1 package of actions.
- Secured the services of a meeting facilitator which helped resolve most issues regarding the project-specific operations plan.

Clifton Court Fish Screens and 10,300 cfs:

- Developed several alternative conceptual designs and cost estimates for a new intake and fish facility for Clifton Court Forebay.
- Performed preliminary engineering analyses and collected geologic information on potential intake sites.
- Initiated debris studies to improve trash rack collection efficiency at water project fish salvaging facilities.
- Formed a South Delta Fish Facilities Forum Group and a process to provide guidance and recommend priorities in the development of the Clifton Court Forebay and Tracy Fish Test Facility projects. The Forum is currently evaluating background information regarding these projects.

Tracy Fish Test Facility:

- Began evaluating alternatives for the Tracy Fish Test Facility (TFTF).
- The Tracy Technical Advisory Team met and developed plans for a TFTF.
- Awarded contracts for a traffic study and public involvement for the TFTF.
- Purchased approximately 30 acres of property adjacent to the proposed construction site to be used for construction purposes.
- Formed a South Delta Fish Facilities Forum Group and a process to provide guidance and recommend priorities in the development of the Clifton Court Forebay and Tracy Fish Test Facility projects. The Forum is currently evaluating background information regarding these projects.

Lower San Joaquin Flood Improvements:

- Continued coordinating this project with the U.S. Army Corps of Engineers and the Comprehensive Study Team.
- Evaluating opportunities for conceptual flood improvements as identified in the internal draft Comprehensive Study Lower San Joaquin River Assessment Information Report (October 2001).
- Pursuing alternative funding sources for potential concept-projects along the lower San Joaquin River, including Proposition 13 Flood Corridor Protection Program (FCPP) grant program.
- Assisting Reclamation District 2107 in the preparation and submission of an FCPP grant proposal seeking approximately \$5 million for flood corridor protection, agriculture preservation, and ecosystem restoration.

Old River and Rock Slough Water Quality Improvement Projects:

- Collected and analyzed water quality samples from numerous locations in Old River and Rock Slough, evaluated sampling results, and prepared an internal draft technical memorandum.
- Surveyed project areas to identify potential drainage sources and Mapped potential drainage sources.
- Initiated comparison of preliminary analytical data to historical data.
- Developed methodology for evaluation of alternatives.
- Initiated evaluation of sources and modeling approach and development of preliminary model.
- Conducted a CALFED Veale/Byron Workgroup public meeting on May 28, 2002.
- Submitted a draft internal technical memorandum in January 2003.

North Delta Actions – to improve flood protection and conveyance facilities, water quality, Delta fisheries, and avoid water supply disruptions, to increase the water supply reliability for the SWP and CVP and to enhance the Delta ecosystem.

Delta Cross Channel Re-Operation:

- Conducted two years of studies and experiments to provide a solid basis for future operations of the DCC.
- Conducted intensive hydrodynamic and water quality monitoring of DCC tidal operations.
- Conducted juvenile/adult fish tracking studies.
- Independent Science Panel reviewed all work plans and results of first two years of studies.
- Held public workshops to present the preliminary results of the studies.

Through-Delta Facility:

- Developed an integrated DCC/Through-Delta Facility (TDF) Work Team.
- Formed a North Delta Fish Facilities Technical Team to assist in developing screening concepts for the Sacramento River 4,000 cfs intake and facility concepts for the TDF discharge into the Mokelumne River.
- Using computer models, analyzed the possible benefits of a joint DCC and TDF operation.
- Initiated three research projects to address whether adult fish species entering a TDF can be safely lifted back into the Sacramento River system.
- Commenced research at U.C. Davis regarding fish friendly trash racks that may be used on a TDF.

North Delta Flood Control and Ecosystem Restoration Improvements Program:

- Awarded a consultant contract for preparation of an EIR/EIS; drafted Chapter 1 of EIR/EIS including Purpose and Need Statement; outlined subsequent chapters; nearing completion of biological surveys.
- Constructed a regional hydraulic model to be used for alternatives analysis and completed a peer review process of the model.
- Worked with the U.S. Army Corps of Engineers (USACE) and the Reclamation Board to amend the existing feasibility study authorization to allow USACE Planning to act as federal lead agency for the project.
- Filed a joint Notice of Intent/Notice of Preparation (NOI/NOP) for the North Delta Flood Control and Ecosystem Restoration Improvements with the USACE.
- Conducted joint public scoping meetings with the USACE.
- Initiated development of technical alternatives and screening criteria for flood control and ecosystem restoration.
- Engaged North Delta Agency Team to review project permitting requirements, develop ASIP, and advise preparation of EIR/EIS.
- Identified and initiated strategies to address science uncertainties with the proposed project.
- Negotiated and initiated the processing of contracts to address science issues including sediment dynamics modeling and academic collaboration.

SWP/CVP Intertie Actions – to consider the need for two specific SWP/CVP intertie projects which physically connect the SWP and CVP facilities.

Delta Mendota Canal/California Aqueduct Intertie:

- Completed a Value Planning Study, completed CALSIM and DSM modeling studies, and initiated environmental documentation and conceptual designs.

Clifton Court Forebay/Tracy Pumping Plant Intertie:

- Formed a South Delta Fish Facilities Forum Group and a process to provide guidance and recommend priorities in the development of the Clifton Court Forebay, Tracy Fish Test Facility, and intertie projects. The Forum is currently evaluating background information regarding these projects.

Complimentary Actions – objectives that were not analyzed in the final Programmatic EIS/EIR.

Temporary Barriers Project:

- Obtained all necessary permits for continuing the project.
- Installed three portable pumps on Union Island to mitigate the effects of the barriers upstream of these diversions.
- Submitted an application to the USACE to conduct limited dredging and extend agricultural diversions, as necessary, in the south Delta area.
- Signed an agreement with a landowner on Coney Island to replace a siphon with a pump and modify the on-island distribution system.

San Luis Reservoir Low Point Improvement Project:

- DWR signed an agreement for Santa Clara Valley Water District (SCVWD) to conduct the Low Point Improvement Study.
- USBR issued a NOI for the study and contracted with SCVWD to conduct an appraisal level operational study of ways to re-operate Anderson Reservoir.
- SCVWD has accomplished the following regarding the project study:
 - Developed a project scope
 - Prepared a draft project work plan
 - Developed Goals and Objectives for the project
 - Developed a broad list of conceptual alternatives
 - Formed a Regulatory Compliance Work Group and a Stakeholder Committee to assist in project planning
 - Issued an NOP for the study in August 2002
 - Conducted public scoping meetings in August 2002
 - Completed an initial screening of approximately 80 conceptual alternatives

Oversight, Coordination, and Science:

- The California Bay-Delta Program provided general oversight to assist in meeting the goals and objectives of the Conveyance Program, ensure integration with other programs, and provide Science support, where necessary.
- DWR managed the overall Conveyance Program.

Specific Accomplishments – Environmental Water Account

In the first two years and part of the third year, the concept of the EWA as presented in the CALFED ROD has become a reality in providing additional protection to sensitive Bay/Delta fish species and obtaining the ESA commitments to stabilize the water supplies of the SWP and CVP.

Although 2002 was a dry year, both SWP and CVP allocations to their users south and west of the Delta were at least 70 percent of contractor requests by late summer. Despite various challenges EWA has faced through the past two and a half years, its accomplishments have been significant. For example, EWA provides the Project and Management Agencies the ability to plan in advance for operations changes taken to protect fish. This “proactive” (as opposed to reactive) approach to resource protection not only reduces conflict and uncertainty, it permits more timely responses and helps to avoid crisis management. With EWA, time is not lost negotiating the scale, duration, or timing of an operations response, or in weighing of possible project impacts (since EWA compensates for them).

The specific, year-by-year accomplishments of the EWA program are summarized below.

Year 2001

- The Environmental Water Account obtained water through purchases and operational arrangements and used it to replace project supplies lost during pumping curtailments for fish, thus preserving water supply reliability.
- Stream habitat was improved when release of EWA water from an upstream reservoir coincided with a habitat need.
- Water was released from river level outlets, bypassing the powerhouse at Folsom Dam to improve salmon spawning conditions and provide suitable water temperature for over-summering juvenile steelhead in the lower American River; EWA compensated for the lost generation.
- ESA-related commitments for continued operation of the CVP and SWP were provided based on a functional EWA and \$150 million in Ecosystem Restoration Program funding.

Year 2002

- The Environmental Water Account obtained water through purchases and operational arrangements and used it to replace project supplies lost during pumping curtailments for fish, thus preserving water supply reliability.
- Stream habitat was improved when release of EWA water from an upstream reservoir coincided with a habitat need.
- Water was released from river level outlets, bypassing the powerhouse at Folsom Dam to improve salmon spawning conditions and provide suitable water temperature for over-summering juvenile steelhead; EWA compensated for the lost generation.

- Partnered with the State Water Project contractors in a 2:1 Exchange Agreement to protect some EWA assets in San Luis Reservoir that would have been lost due to the reservoir filling. The contractors received water to augment their supplies in March and returned half of this amount to the EWA after the high point in San Luis Reservoir storage in April, thus preserving the returned EWA water for fish protection actions.
- Facilitated an increase in the allocation to south-of-Delta agricultural CVP contractors through coordinated management of EWA and (B)(2) water that ultimately resulted in a 70 percent allocation.
- Continued coordination between the Management Agencies and Project Agencies to maximize opportunities to obtain and use EWA assets for fishery benefits.
- ESA-related commitments for continued operation of the CVP and SWP were provided based on a functional EWA and \$150 million in Ecosystem Restoration Program funding.

Year 2003

- The Environmental Water Account obtained water through purchases and operational arrangements and used it to replace project supplies lost during pumping curtailments for fish, thus preserving water supply reliability.
- ESA-related commitments for continued operation of the CVP and SWP were provided based on a functional EWA and \$150 million in Ecosystem Restoration Program funding.

The following table summarizes the level of EWA purchases and variable assets that were obtained in 2001, 2002, and 2003 respectively. In the first two years, the EWA has achieved over 530 TAF of actions to better protect fish and improve habitat and purchased over 550 TAF of water to replace the water used to implement these actions.

EWA ASSETS ACQUIRED IN 2001, 2002 AND 2003

Assets Acquired	2001 (Dry Year) (TAF)	2002 (Dry Year) (TAF)	2003* (Above Normal Year) (TAF)
Purchases Upstream Of Delta			
State	+105	+135	+ 70
Federal	0	+ 7	0
Conveyance and Carriage Costs	- 17	- 31	- 14
Purchases South Of Delta			
State	+159	+ 37	+145
Federal (in kind in 2001)	+ 72	+ 60	0
Subtotal	=319	=208	=201
Operational	+ 55	+19 (Net)	+ 54 (Net)
Total	=374	=227	=255
Fish Actions	- 290 <u>(290 State/ 0 Fed)</u>	-280 <u>(208 State/ 72 Fed)</u>	-315 <u>(290 State/ 25Fed)</u>
Carryover to 2002	= 84	+84	
Carryover to 2003		=31	+ 31
Carryover to 2004			= -29
Source Shift Activation	50 of 100	0 of 100	0 of 100

* Estimated quantities since 2003 is only about half over.

Watershed Program Goals and Objectives



Goals of the Program and Record of Decision Commitments

The purpose of the Watershed Program is to aid in achieving the overarching goals of the California Bay-Delta Program, by working with local communities at the watershed level.

The CALFED Record of Decision (ROD) identified two commitments to be met by the program.

Establish a grant program to solicit, evaluate and fund local projects that contribute towards achieving California Bay-Delta Program goals.

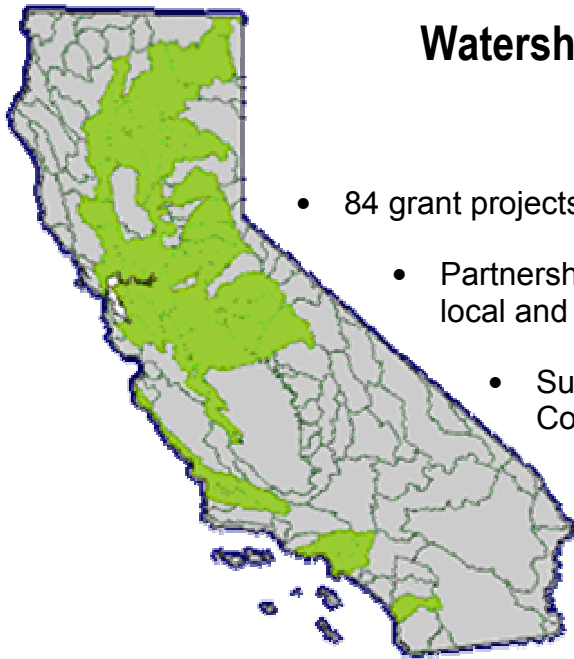
Develop Watershed program performance measures and monitoring protocols consistent with the Science Program.

In addition to these two major commitments, the program has and will continue to carry out a range of program activities designed to achieve the following broad goals and objectives:

Provide assistance, both technical and financial, for watershed activities that help achieve the mission and objectives of the California Bay-Delta Program as a whole.

Promote collaboration and integration among existing and future watershed programs at all levels.

- Help develop, adopt, and apply watershed monitoring and assessment protocols at the watershed level.
- Integrate the watershed program with other California Bay-Delta Program efforts.
- Better define and determine the relationships between watershed processes and the goals and objectives of the California Bay-Delta Program.
- Facilitate, and improve coordination, collaboration, and assistance among government agencies, other organizations, and local watershed groups.
- Support focused education and outreach efforts.
- Implement a strategy that will ensure support and long-term sustainability of local watershed management efforts.



Watershed Program Highlights (Years 1-3)

- 84 grant projects to 50 community based
- Partnership Seminars have trained 80 local and agency personnel
- Support for 20 Watershed Coordinators

 Funded Grants

Specific Accomplishments

**Provide assistance, both technical and financial,
for watershed activities that help achieve the mission and objectives
of the California Bay-Delta Program as a whole**

- All 54 projects receiving awards from the Watershed Program's 2000-2001 are now under contract and have begun work.
- Awarded an additional 30 grants in the 2001-2002 program. This program was carried out using a "Consolidated Request for Proposals" (RFP) package, which solicited proposals for the California Bay-Delta Program Watershed and Drinking Water Programs, and the SWRCB's Non-Point Source, Coastal Non-Point Source, and Watershed Protection programs. To date, no contracts have been issued for the awarded projects.
- Created 16 technical positions in fiscal year 2000-2001 for Department of Water Resources (DWR), Department of Fish and Game (DFG), California Department of Forestry (CDF), and California Department of Food and Agriculture (CDFA). Filled 5 of the 16 technical positions that were approved and funded.
- Made available \$1.25 million in 2001-2002 to the Department of Conservation (DOC) to allow DOC to continue providing its Watershed Coordinator Grants Program to Resource Conservation districts (RCDs). The funding will continue to support approximately 17 RCD Watershed Coordinators within the California Bay-Delta Program solution area.

- Funded and hosted two Watershed Partnerships Seminars in California (during September 2001 and April 2003). The 70+ participants were chosen from among publicly solicited nominations.
- Program funding was provided to CDF in 2001-2002 to complete baseline forest and rangeland vegetation mapping and classification for Central Valley watersheds. In 2002-2003, CDF directed program funding toward the development of a Regional Watershed Assessment Manual for the Sierra and Westside tributaries.

**Promote collaboration and integration
among existing and future watershed programs at all levels**

- The BDPAC Watershed subcommittee held several regional meetings (in Modesto, Los Angeles, Cache Creek, and the Mokelumne River) to outreach with potential partners and others interested in the California Bay-Delta Program.
- The California Bay-Delta Program Watershed and Drinking Water Program, in partnership with the State Water Resources Control Board (SWRCB), hosted numerous pre-solicitation and mid-solicitation workshops as a part of the consolidated RFP process, to inform applicants of program interests, goals, objectives, and priorities.
- DWR and EPA have reconvened the Interagency Watershed Advisory Team (IWAT), with a primary purpose to assist the Watershed Program to develop and update program plans and increase the involvement of science into the program. IWAT has been responsible for developing the current Multi year and Program plan.

Science Goals and Objectives



Summary of Progress Against Select ROD Milestones

ROD Milestone*	Comment
Appoint an independent science board for the CALFED Program as a whole by the middle of 2001.	Scheduled for Authority confirmation, August 2003
Appoint an independent science panel for the EWA by the middle of 2001.	Completed; Annual review held since Oct 2001
Coordinate existing monitoring and scientific research programs.	Ongoing, see below for status
Refine the set of ecological, operational and other predictive models that will be used in the evaluative process by the end of 2001.	Ongoing, see performance measure and issue-specific activities below
Establish performance measures and indicators, and a consistent strategy of on-going development of these, for each of the program areas.	Ongoing, see performance measure section below
<p>Develop an annual science report, format and content, which includes:</p> <ul style="list-style-type: none"> A. Status of the species and effectiveness of efforts to improve conditions, including EWA, ERP and water management strategies, and provide recommendations to maximize fishery benefits while minimizing impacts to water supply. B. Assessment of progress and effectiveness of each program element as indicated by performance measures and indicators. C. Complete feasibility study to establish and construct CALFED Science Center. D. Recommended research and/or program adjustments. E. Prepare first annual report by the end of 2001. 	<ul style="list-style-type: none"> A. Ongoing, see description of issue-specific activities related to water operations and biology B. Ongoing, see performance measure section C. Progress is being made through the Bay Delta Science Consortium D. Ongoing, included in organization of science advisors and a range of research agendas developed through activities related to water operations and biology E. Completed

*Note that these ROD milestones represent a partial summary of Science Program goals and responsibilities described in the ROD.

Program Highlights (Years 1-3)

Progress during the first three years of the CALFED Science Program included:

- An intensive effort to clarify and improve the state of knowledge on a number of specific, central issues;
- Establishing a practice of seeking external peer review and advice;
- Initiating the use of public workshops as forums to publicly discuss complex technical issues;
- Developing a common methodology for assessing performance at different scales;
- Developing a strategy for monitoring program design and implementing a pilot monitoring program for wetlands restoration;
- Providing ongoing advice to individual program elements; and
- Developing and implementing a basic organizational design for integrating science throughout the California Bay-Delta Program.

Specific Accomplishments

During the first three years, the Science Program engaged in an intensive effort to clarify the state of knowledge on a number of specific scientific issues central to Bay-Delta Program decisions.

Selected Science Program Activities During Years 1-3 Related to Specific Issue Areas	
Issue	Activities
Splittail life history, population dynamics, relations between habitat, flow, population, and potential threats	ERP initiated white paper; Science Program conducted public review of draft at workshop, Jan 2001; studies addressing splittail and floodplain habitat uncertainties initiated
Delta Salinity Responses to Physical Channel Configuration Changes and Operations	Convened workshop on Suisun Marsh levee breach: salinity responses June 2001; funded Delta hydrodynamics study; co-funded Delta Cross Channel hydrodynamic studies
Salmon life history, population dynamics, relations between habitat, flow, population, take, direct and indirect mortality, and potential threats	Initiated an annual workshop to review water operations and environmental water management-related questions; prepared science agenda translating management questions into focused study topics; facilitated discussion of these technical issues in many forums, including the annual EWA review, and the planned (June '03) symposium on OCAP biological assessments.
Delta smelt life history, population dynamics, relations between habitat, flow, population, take, direct and indirect mortality, and potential threats	Initiated an annual workshop to review water operations and environmental water management-related questions; funded completion of white paper and otolith studies; facilitated discussion of these technical issues in many forums, including the annual EWA review, and the planned (June '03) symposium on OCAP biological assessments; supported development of research agenda by IEP workgroup.

Selected Science Program Activities Years 1-3 (cont.)	
Issue	Activities
Delta water quality	Reviewed baseline water quality analysis for Drinking Water Program; funded additional analysis of existing water quality data; reviewed In-Delta storage project water quality assessment; provided technical advice to drinking water program on science strategies.

Performance Measures

The Science Program has developed a template to guide performance measure selection and development throughout the Bay-Delta Program based not only what had already been accomplished by CALFED, but on what has and has not worked well in programs ranging from similar water management and restoration efforts to business models for sustainability. This template explains how to:

- Build program-wide assessments from a combination of project, regional/ classes of projects, and system-wide measurements
- Focus monitoring on controlling factors that are expected to change, actually measurable in the field, and directly attributable to specific Bay-Delta actions
- Choose indicators that best meet *both* program goals *and* are based on realistic data requirements from a list of desirable measurements

A draft set of prototype performance measures were then developed using this template by a Science Program consultant working directly with CALFED and agency staff directly involved in the Ecosystem Restoration, Levee, Drinking Water Quality, and Water Management programs. These draft prototypes represent indicators that could be described based on currently available data (ie. not requiring additional or immediate staff time for data analysis) – in other words they represent what can be said right now, and are a test of the utility of the Science Program’s template. As more robust indicators are developed, they can be added to or substituted for the prototypes in the portfolio.

As with all scientific products, we are subjecting both the template and the prototype indicators to a peer review process. We have already received a number of significant comments from within the Bay-Delta Program community and will have addressed those for the prototypes by June 2003. It is important to note that many of the comments consistently highlight data gaps that need to be filled in order to support more robust indicators for tracking complex processes such as population-level changes. After completing revisions to the prototypes, the Science Program will publish them as examples, and use them to help explain what the technical expectations are for performance measures developed by individual programs and to provide a clear and consistent charge to the Executive Science Board which will be responsible for them.

Monitoring & Data Management Strategy and Activities

Monitoring is critical both for assessing changes effected by Bay-Delta Program actions and for real-time water and resource management. The Science Program has engaged in a number of activities aimed at enhancing existing monitoring efforts, providing guidance to California Bay-Delta Program elements on monitoring design and program objectives, and, in conjunction with the Ecosystem Restoration Program, filling a critical gap in monitoring the effects of tidal wetland restoration in the Bay and Delta system.

Science Program Monitoring and Data Management Strategies and Objectives	
Guidance on Monitoring Program Design	<ul style="list-style-type: none">• Design monitoring to support explanations; assessment will follow• Define gaps and indicators based on specific management questions• Address scale in time and space• No cookie cutter protocols
Enhance and Refine Existing Monitoring Programs	<ul style="list-style-type: none">• Schedule periodic review of existing monitoring (~5 years)• IEP's review of its Environmental Monitoring Program is example of high quality review and mid-course adjustment• Use external experts in review
Data Management Strategy	<ul style="list-style-type: none">• Expect multiple, distributed databases• Use common language to facilitate cross-database analyses• Fund data analyses as means to link databases

During the first three years of the program, Science Program staff have been working towards these objectives through a number of different activities, including:

- Providing general advice to CALFED and implementing agency staff on monitoring design and, where possible and appropriate, providing expert advice on specific projects when a science advisor or member of a standing science board has time available to do so;
- Forming a team of investigators to conduct a pilot monitoring effort of tidal wetland restoration in the Bay and Delta aimed at describing the effects of restoration on ecosystem processes;
- Ongoing coordination with IEP to support and enhance data analyses, periodic subprogram reviews, cross-institutional collaboration, and development of research agendas to support critical Bay-Delta Program information needs; and
- Support of the Bay Delta Science Consortium

Program Delays

Despite the progress made during the first three years, several significant delays and institutional obstacles have hampered full implementation of the Science Program. The most significant delay has been caused by contracting and fiscal issues. In most cases, the time taken to process contracts with other state agencies and public entities has ranged from 16 to 24+ months. As a result, many program activities related to performance assessment, data analyses, and work conducted by standing Science Boards were delayed by approximately 1 ½ years. While work is progressing, there are still a number of outstanding systemic issues that will continue to hamper progress and are likely to cause additional delays in the future. Core remaining contracting issues are:

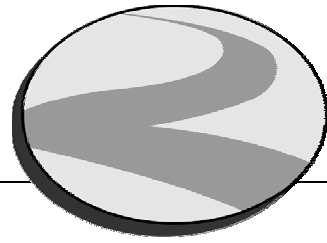
- The lack of an established system for securing external peer review and advice from independent scientists. The current contracting process is structured to provide services in an open, competitive environment. For many reasons, it is inappropriate to competitively select scientific reviewers, but no process exists for sole source agreements with individuals serving on review panels.
- Continued and protracted disagreement between state agencies and the University of California (and other public educational institutions) over standard contract terms, including rights in data, and conflict of interest. These disagreements have resulted in delays of up to 1 year or more in many CALFED contracts. Involving educational institutions in science efforts is critical to the success of the science effort within CALFED and these disagreements jeopardize progress.
- Fiscal issues that arise because of the mismatch between the time funds are appropriated (there is a 3-year time limit on expenditure of some state appropriations) and the time when work can actually begin after a contract is executed (since it has taken over 1.5 years to execute all contracts).

The ROD milestone of appointing a CALFED-wide science board (originally scheduled for June of 2001) was postponed until the system of standing boards and panels (see section below on Program Organization for a more complete description) the relationship between the different groups was tested using the EWA Review Panel and the ERP Independent Science Board in conjunction with Technical Review Panels convened during 2000-20003 to address critical, immediate scientific issues. The Lead Scientist will be bringing a suite of nominations for the Executive Science Board to the Authority for confirmation in August, 2003.

The other ROD milestones are ongoing program objectives, the status of which is described in more detail in the sections above.

In addition to implementation delays, there are also a significant number of scientific issues and requests for workshops and reviews that can not be addressed at current budget levels.

Oversight & Coordination Goals and Objectives



Goals of the Program and Record of Decision Commitments

Oversight and Coordination provides for the integration and cross-program activities associated with implementation of the Bay-Delta Program. In addition, Oversight and Coordination supports the infrastructure of the California Bay-Delta Authority (CBDA) and its staff, including legal, contracts, fiscal, human resources and staff support, and information technology/data management.

The CALFED Record of Decision (ROD) identified eight commitments to be met. For each ROD commitment, key objectives have been identified for Oversight and Coordination of the Bay-Delta Program:

- **Public affairs/public involvement**
 - Foster understanding and support for the Program.
 - Support overall Program objectives as well as individual Program elements.
 - Create consistency across the Program through visual and written information.
- **Environmental justice**
 - Develop and implement strategies to meet annual and multi-year objectives listed as Environmental Justice activities under Program Plan.
 - Ensure meaningful and substantive participation of community-based organizations and environmental justice groups in California Bay-Delta Program planning, Program implementation, and decision-making processes.
 - Develop and implement a California Bay-Delta Program-wide environmental justice education and technical assistance program.
 - Develop tools and capacity of State and Federal agencies and staff to identify, understand, and evaluate environmental justice issues.
 - Develop environmental justice goals and objectives for each program area, including identifying and developing specific methods to address and mitigate environmental justice impacts.
 - Collect and analyze additional geographic information to assist in the identification of impacts.
 - Ensure effective participation on technical and advisory workgroups by members of potentially affected and/or adversely impacted populations.

- **Program-wide performance and tracking**
 - Track the progress of program projects and activities and assess overall schedule and funding performance of the California Bay-Delta Program.
 - Provide data to effectively review and modify, as needed, the program's timelines and activities to meet the California Bay-Delta Program's overall goals and objectives.
 - Review and report annually state and federal funding for each of the program elements.
- **Regional coordination**
 - Provide assistance to the Program elements related to integration of their efforts.
 - Provide outreach relative to the California Bay-Delta Program on a regional level.
 - Seek input from regional efforts on what the regional needs are and how the California Bay-Delta Program can help address these needs.
- **BDPAC**
 - Provide assistance and recommendations to the Secretary of the Interior, the participating federal agencies, to the Governor of California and the California Bay-Delta Authority on program implementation, including performance, priorities, integration, and balance.
 - Advise and make recommendations on issues related to the Program and any of its processes, projects, or programs.
- **Finance plan**
 - Develop options and recommendations for long-term financing of the California Bay-Delta Program.
- **Water management strategy**
 - Maximize the use of available water supplies through water conservation and recycling and through water quality improvements.
 - Increase the flexibility of water systems at the state, federal, and local levels through improvements in conveyance, storage, and water project operations.
 - Develop groundwater and surface storage projects to increase water supply flexibility and reliability.
- **Tribal relations**
 - Secure the services of a California Bay-Delta Program tribal coordinator who will prepare a plan for promoting and coordinating tribal relations.

Specific Accomplishments

Public Affairs/Public Involvement

- Created three annual reports, prepared news releases and printed materials, sponsored events and briefings. Completed revising the website.

Environmental Justice

- An EJ Coordinator was hired in November. The EJ Subcommittee (EJSC) had its original multiyear workplan approved by the BDPAC in March. EJSC meetings were conducted in Richmond with others scheduled for San Francisco, Los Angeles, Chico, Lake County, and the San Joaquin Delta. The EJSC hosted a forum to discuss a draft California Bay-Delta Program Mercury Strategy document with one of its principal authors. An EJ library, with books, videotapes and training materials was created to provide resource materials to CBDA staff, agency partners and EJSC stakeholders. A “standard” EJ presentation, specific to the California Bay-Delta Program efforts, was designed by/for use of Coordinator and other EJSC stakeholders. Coordinator attended EPA’s five day EJ trainer-of-trainers workshop and has participated in three trainings to date. EJ and Watershed subcommittees have forged a close working relationship based on mutual interests and concerns of respective stakeholders. Presentations about EJ activity in the California Bay-Delta Program have been made at the DWR-sponsored Recycled Water Task Force (April), the Planning and Conservation League’s Annual Workshop (April), the Southern California Dialogue Meeting (May), and several other local and/or community based group functions. The Environmental Justice Sub Committee (EJSC) agreed to actively participate in a project designed to address issues related to mercury contamination and fish consumption in the solution area. The EJSC would focus on efforts to maximize effective outreach, participation, and involvement of potentially affected communities in the California Bay-Delta Program strategy and process. An EJ list-serve was created to respond to specific EJ concerns.

Program-Wide Performance and Tracking

- Produced California Bay-Delta Program Tracking Reports. Focused on five of the 11 Program Elements: Storage, Conveyance, Ecosystem Restoration, Watershed, and Drinking Water Quality.
- Held meetings to coordinate and gather data with program and budget staff from state, federal, and local entities.
- Developed and enhanced the content, format, and function of the program tracking data worksheets to improve consistency, accuracy, reliability, and ease of reporting. Transitioned from monthly to annual reporting.
- Formed a transition team in December 2001 to analyze the California Bay-Delta Program Tracking and develop a more cost-effective method.
- Developed Memoranda of Understanding (MOUs) with U.S. Bureau of Reclamation (USBR) and Department of Water Resources (DWR) to coordinate collection, analysis, and reporting of federal and state program tracking data.

Regional Coordination

- Regional coordinators have been identified for all five regions. Funding has been provided to two regional forums: the Southern California Water Dialogue and the Association of Bay Area Governments (ABAG) CALFED Task Force. Regional coordinators have also worked with other regional groups to update them regarding California Bay-Delta Program activities and to hear what their interests are.
- Prepared a draft of the regional implementation plan for the Delta region. Developed regional brochures and region-specific summaries of interests and accomplishments for the annual reports.

BDPAC

- Supported enactment of the California Bay-Delta Authority Act, federal authorization of the Program, additional state and federal financing of the California Bay-Delta Authority Program, and continued study of the In-Delta Storage Project.
- Assisted the Authority in development of funding principles and guidelines for allocation funds from Proposition 50, including funds for the Science Program and development of Program element priorities and work plans.
- Formed nine subcommittees, which assist the Committee by focusing on individual Program areas and elements: Delta Levees and Habitat, Drinking Water, Ecosystem Restoration, Environmental Justice, Steering Committee, Watershed, Water Supply, Water Use Efficiency, and Working Landscapes.

Finance Plan

- No progress was made in Years 1-2 due to lack of funding and contract issues. In Year 3, progress was made on the finance plan. A technical expert team of consultants and staff were put together to provide guidance and advice on the process, approach, and evaluation of benefits, beneficiaries, costs, tools, and program balance.

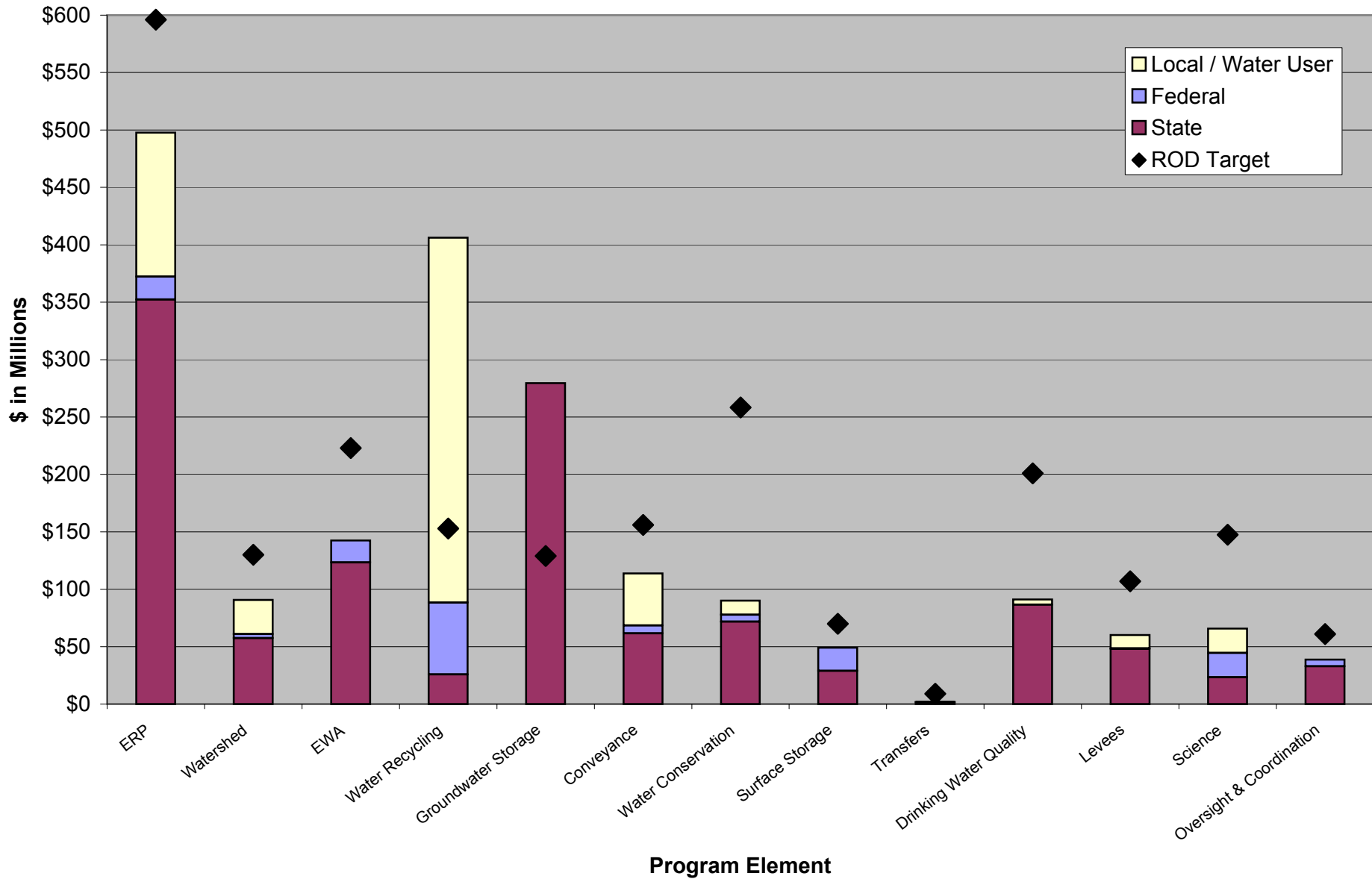
Water Management Strategy

- Progress has been made on Common Assumptions (a unified set of data and modeling tools for conducting water management analyses including the Integrated Storage Investigations (ISI) modeling, water use efficiency assessments, and demand computations for the California Water Plan Update).
- Progress has been made on Integrated Key Milestones. Several high priority projects have been coordinated to meet critical deadlines: Central Valley Project Operating Criteria and Procedures Biological Opinion, Environmental Water Account, Tracy Fish Test Facility, Coordinated Operating Agreement, the USBR (b)(2) opinion under the CVPIA and USBR long-term contract renewal.
- Formed a new water management team consisting of two Assistant Deputy Directors with joint responsibilities for all water management program elements and cross-program integration.

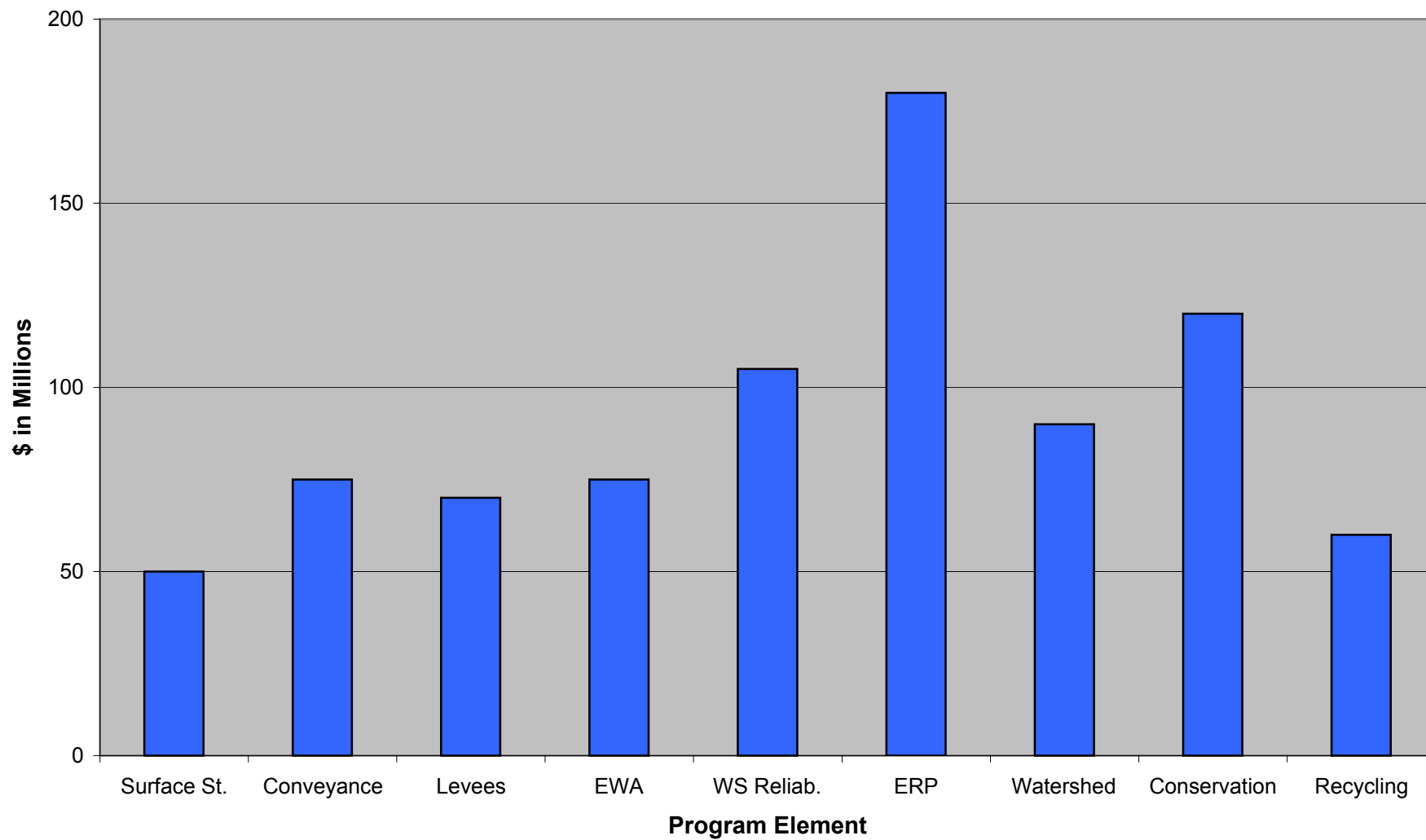
Tribal Relations

- The CBDA is securing the services a tribal coordinator, who will prepare a plan for promoting and coordinating tribal relations.

California Bay-Delta Program Cumulative Funding Years 1-3 by Element



**California Bay-Delta Program
Chapter 7 - Prop 50 Funding by Element**



California Bay-Delta Public Advisory Committee

Meeting Date: 9/11/03
Agenda Item: 6

California Water Plan Update, Water 2025 & the Bay-Delta Program

Description: Panel discussion on coordination between the three processes, approaches for making critical water management decisions in the next few years, and issues related to integrated regional water management planning.

Recommended Action: Committee report to California Bay-Delta Authority and implementing agencies.

Staff Recommendation

Bay-Delta Authority staff recommends the California Bay-Delta Public Advisory Committee report to the California Bay-Delta Authority and implementing agencies on issues related to coordinating the California Water Plan Update, Water 2025 and the Water Supply Reliability elements of the Bay-Delta Program. To facilitate its assessment of Program performance and making recommendations on priorities the Committee asked for this discussion at the June 5, 2003 meeting when questions arose regarding the information needs of the three processes, major milestones, and coordination of schedules for water supply decisions.

Background

The California Water Plan Update, the Federal Water 2025 Strategy, and the Bay-Delta Program Water Supply Reliability elements all call for coordinated and integrated planning for determining future projects, approaches, or strategies for addressing future water needs. The Department of Water Resources Water Plan Update is a strategic plan for State policy/decision makers to guide management and development of water throughout California. Attachments 1 and 2 provide summaries of the content and schedule for this statewide planning effort. Refer to www.WaterPlan.water.ca.gov for draft chapters of the 2003 Update and details on the plan development process. The U.S. Department of Interior's Water 2025 presents six principles, five realities, and four key tools for preventing water crises and conflicts in the west (see Attachment 3 – Water 2025 Materials). For more details, refer to www.usbr.gov for the report entitled "Water 2025: Preventing Crises and Conflict in the West."

The California Bay-Delta Program has a mission to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta. In addition to developing ecosystem restoration goals, the Program has water supply reliability goals for water transfers, storage, conveyance, and water use efficiency. The goals and recent implementation accomplishments are summarized in materials for Agenda Item 5 (attachment 1 – Multi-Years Goals and Objectives).

All three processes call for partnering and relying on local and regional cooperation, coordination, planning, and actions. Authority staff has heard from interests throughout the Solution Area who have said that, although regions have incentives to do integrated resource water management planning, there are challenges and barriers that must be overcome. A summary of those benefits and challenges appears in Attachment 4.

The discussion on the Water Plan Update will focus on goals, schedule and content of Update 2003, coordination with the program and regions, and the need for solid data for decision-making on water management projects/actions. The Water 2025 presentation will provide an overview and describe links to the Program. The Bay-Delta Program discussion will address water supply reliability milestones and decision points, schedules, information requirements, and the need for a tool or process for making the milestone decisions. The discussion will end with a review of regional water resource planning issues common to the regions in the Bay-Delta Program Solution Area.

Panel Discussants

The following panel discussants will introduce the topics:

California Water Plan Update

Kamyar Guivetchi, P.E. – Manager, Statewide Water Planning, Department of Water Resources

Martha Davis – Committee Member and Member of Water Plan Update Advisory Committee

Tom Clark – Committee Member and Member of Water Plan Update Advisory Committee

Water 2025

Susan Ramos – Assistant Regional Director – U.S Bureau of Reclamation

California Bay-Delta Program

Sergio Guillen – Assistant Deputy Director

Tom Gohring – Assistant Deputy Director

Steve Hall – Committee Member, co-chair Water Supply Subcommittee

Jerry Meral – Committee Member, co-chair Water Supply Subcommittee

Frances Spivy-Weber – Committee Member, co-chair Water Use Efficiency Subcommittee

David Guy – Committee Member, co-chair Water Use Efficiency Subcommittee

Cindy Darling – Bay Area Regional Coordinator

Committee Role

Section 79460 (d) of the Bay-Delta Authority Act states that the Committee shall advise and make recommendations to the Authority and Director on issues related to the Program and any its processes, projects or program elements. Reviewing the three processes, their unique qualities and where they overlap will assist the Committee in fulfilling its duty, as stated in the federal charter, of making recommendations on annual priorities and coordination of Program activities to the Authority and implementing agencies.

Attachments:

Attachment 1 – California Water Plan Update 2003 and Beyond

Attachment 2 – Planning for the Future of California Water – What's New

Attachment 3 – Water 2025 materials

Attachment 4 – Integrated Regional Water Management Planning Regional Issues

California Water Plan Update 2003 & Beyond

**Bay-Delta
Public Advisory Committee
September 11, 2003**

Topics for Today's Briefing

- Update 2003 Overview & Objectives
- New Planning Framework & Limitations
- Phased Work Plan
- Water Plan – CALFED Coordination
- Water Plan Goals for 2030
- Take-Home Messages
- Contents of Update 2003

California Water Plan

- **Purpose**

- Strategic plan for state policy/decision makers
- Guide for managing & developing CA water
- Framework for investing public funds

- **General Content**

- Basic information - water resources & system
- Current water supplies and uses
- Scenarios for future supplies and use
- Recommendations (Strategies & State Role)
- No mandates; No authorization

Water Plan Update 2003

DWR Goals & Approach

- **Goals**

- Meet Water Code requirements
- Expand public input
- Develop a “useful” plan

- **Approach**

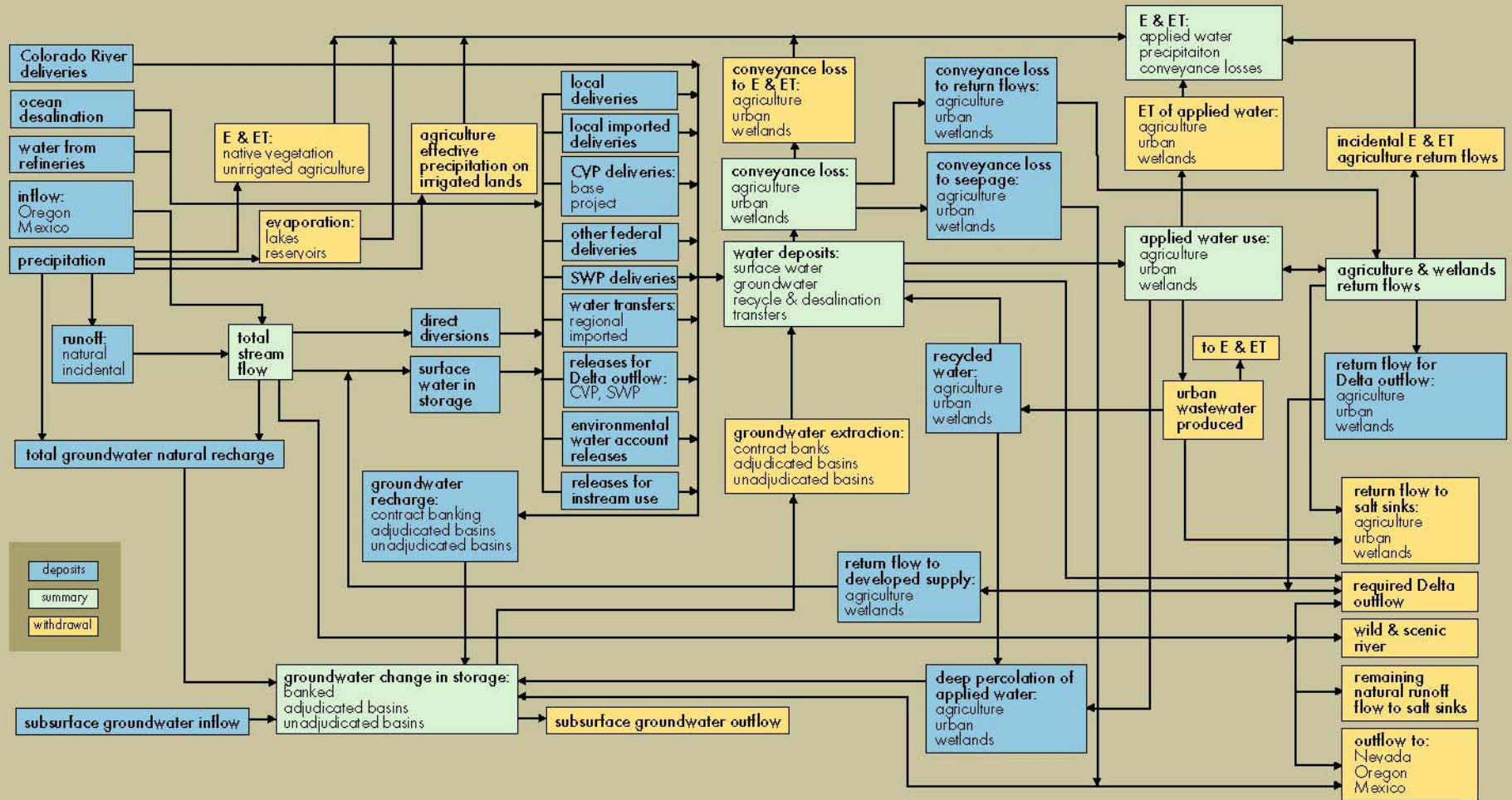
- Strategic Planning model; New framework
- Open & transparent public process
- Seek collaborative recommendations

New Planning Framework

What's Different

- **Water Portfolios** – Estimate water supplies and uses for recent years using actual data
- **Regional Reports** - Describe conditions, challenges, responses & planning efforts for Hydrologic Regions (SB 672 – Machado)
- **Multiple Scenarios** – Consider several plausible “Futures” to account for uncertainties and risks (Not a single forecast)
- **Diverse Strategies** - Assess potential benefits, costs, implementation issues and solutions for two dozen resource management strategies
 - Using the 3 E's (economics, environment, equity)

CALIFORNIA/REGION SAMPLE WATER FLOW DIAGRAM



Limitation Encountered

- **Significant data and information gaps**
- Modeling tools are not yet fully developed, documented, or tested for 2030 studies
- **Significant resources and time were needed to reformulate the process and develop the new collaborative process and planning framework**
- DWR staff and budget for Water Plan activities are reduced

Phased Work Plan

- **Work in 2003**
 - Public Review Draft of Update 2003
 - Implement Planning Framework with available data & information
 - Narrative 2030 Future Scenarios & Options
 - Make policy recommendations
 - Work Plan for subsequent quantitative studies
- **Work in 2004**
 - Public Comment & Release Final Update 2003
 - Select methods, tools, data and assumptions for more Quantitative 2030 Scenarios & Options
- **Work in 2005 (Begins Update 2008)**
 - Conduct Quantitative 2030 Scenarios & Options

Coordination with CALFED

- **CALFED ROD / Program is a big part of the State and Federal Response**
- **Promote Regional Planning & Implementation**
- **Use Common Assumptions and Estimates for Management Strategies**
 - Ag. & Urban WUE, Recycling, Desal, etc.
- **Use Common Data & Analytical Tools**
- **Have Common Stakeholders**

Four Volumes of Update 2003

- **Volume 1 – Strategic Plan** (150 pages)
 - For policy makers & resource managers
- **Volume 2 – Regional Reports** (~ 250 pages)
 - Per SB 672 (Machado)
 - 10 Hydrologic Regions & Mt. Counties
- **Volume 3 – Reference Guide** (~ 350 pages)
 - For broad audience including students
 - Supplemental information
- **Volume 4 – Technical Guide** (Electronic)
 - For technical staff, academia, consultants
 - Documentation for data, methods & tools

Volume 1 – Strategic Plan

- **Front Matter** –Foreword, Users Guide, Summary
- **Ch 1 – Overview**
 - Key Themes & “Take Home Messages”
 - New Planning Framework & Phased Work Plan
- **Ch 2 – CA Water Today** (Statewide Perspective)
- **Ch 3 – Planning for an Uncertain Future**
- **Ch 4 – Importance of Regional Planning**
 - Tools for Integrated Regional Resource Planning
 - Summaries of 11 Regional Reports & Case Studies
- **Ch 5 – Resource Management Strategies**
 - Two dozen (Defn, Benefits, Costs, Impacts, Rec'ds)
- **Ch 6 – State's Role, Financing & Action Plan**

Goals of Water Plan Planning for 2030

- **Accommodate another 17+ million people**
- **Grow the Economy**
- **Protect Groundwater Basins**
- **Restore the Ecosystem**
- **Preserve Agriculture**
- **Deal with Uncertainties**

Ch 1 – Overview (Messages)

- **Acknowledge that large-scale projects are giving way to regional planning & solutions**
- **Describe changing State Role & Financing**
- **Promote sustainable watershed management**

Ch 1 – Overview (Messages)

- **Improve coordination of land use planning & water management**
- **Importance of integrated, regionally-based, multi-resource planning**
- **Diversify Regional Portfolios using many resource management strategies**
- **Reduce uncertainty**
 - **Fill data & tool gaps**

Ch 2 – CA Water Today

- **Historical Trends**
- **Current Water Uses & Supplies**
 - State “Water Portfolios” for 1998, 2000 & 2001
- **Jurisdictional Roles in Water Management**
- **How Water is Allocated, Used & Regulated**
- **Challenges** (Population, WQ, Overdraft, etc)
- **Today’s Responses to Challenges**
 - Federal, State & Regional Efforts
 - CALFED ROD, Colorado River Agreement, IRPs

Ch 3- Planning for Uncertain Future Considerations & Strategies for 2030

- **Future of California Agriculture (AIC Study)**
- **Extreme Hydrologic Events**
 - Droughts & Floods
- **Catastrophic Events**
 - Earthquake, Levee Failure, Toxic Spill, Wildfire, etc
- **Global Climate Change**
- **Contaminated Supplies; New Regulations**
- **Next Steps Using Data & Analytical Tools**
- **Narratives for Four Plausible Scenarios**

Ch 4 – Importance of Regional Planning

Regional Summaries, Framework & Tools

- **Current Resource Planning in California**
- **Benefits/Costs of Regional Planning - Watershed Mgmt**
- **Considerations**
 - Sustainability Using the 3 E's – Environment, Economy & Equity
 - Water Reliability Planning – Integrating Strategies
 - Institutional Tools (Collaboration, Education, Legislation, etc)
- **Major Implementation Issues**
- **Recommendations and State Role**
 - Initiate and support regional planning efforts
 - Diversify & Pool Regional Resource Portfolios
 - Reduce jurisdictional overlap & conflicts
 - Consolidate & Streamline Legislatively-mandated resource plans
- **Summary of 11 Regional Reports (Expanded in Vol. 2)**
- **Case studies of Regional Planning Efforts (Vol. 2)**

California Water Plan
Update 2003

Mountain Counties and Hydrologic Regions in California

Mountain Counties



Regional Water Planning Efforts Case Studies (North to South)

- Sac Valley Water Mgmt Program
- Sacramento Water Forum
- Bay Area Water Agencies Coalition
- San Joaquin Exchange Contractor's Integrated Resource Plan
- San Joaquin Valley Water Coalition
- MWDSC's Integrated Resource Plan
- Santa Ana River Watershed Program

Ch 5 – Resource Management Strategies

- Economic Incentives Policy
- Urban Use Efficiency
- Agricultural Use Efficiency
- System Reoperation
- Urban Runoff Management
- Conjunctive Management
- Water Transfers
- Conveyance Facilities
- Precipitation Enhancement
- Recycled Municipal Water
- Desalination
- Surface Storage – CALFED
- Surface Storage –Region/Local
- Watershed Management
- Ecosystem Restoration
- Floodplain Management
- Urban Land Use Management
- Working Lands Management
- Recharge Area Protection
- Pollution Prevention
- Matching Water Quality to Use
- Drinking Water Treatment & Distribution
- Aquifer Remediation
- Water-Dependent Recreation
- Other R&D (Rainfed Agriculture, Fog Collection, Water Bags, etc.)

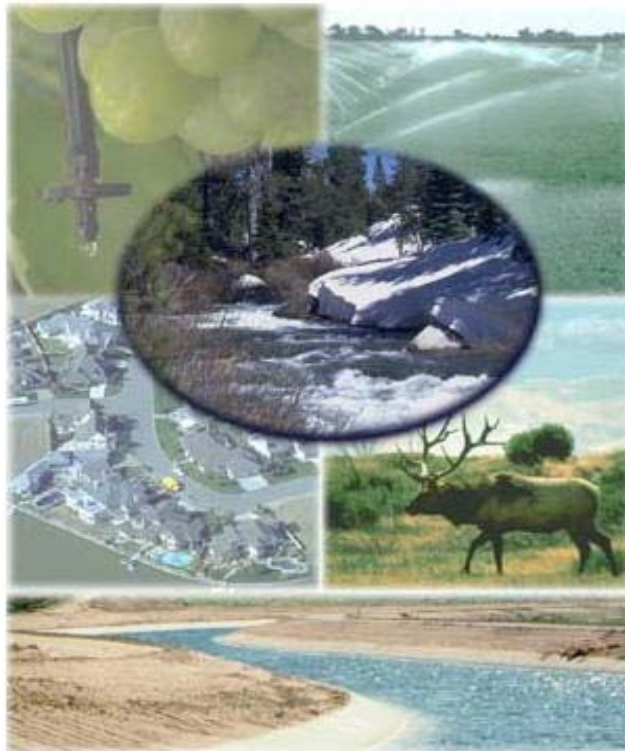
Ch 6 - State's Role & Financing

- Provide guidelines for protecting & restoring the environment; preserving agriculture & protecting public trust values
- Promote integrated regional resource planning
- Assist Regions implement sustainable integrated resource plans (funding and technical assistance)
- Provide principles for providing State assistance and investing public funds
- Plan for filling gaps in data & analytical tools
- Provide performance measures & implementation schedule; advocate adaptive management



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DEPARTMENT • OF • WATER • RESOURCES
CALIFORNIA WATER PLAN
♦ UPDATE 2003 ♦



- *Background*
- *Draft Assumptions and Estimates*
- *Advisory Committee and Work Groups*
- *Extended Review Forum*
- *Previous California Water Plan Updates*
- *Public Review Comments*
- *Chapter schedules/deadlines*

www.waterplan.water.ca.gov/b160/indexb160.html

Water Plan Update 2003

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[Potential Water Supply Crises by 2025](#) | [Population Growth](#) | [Annual Precipitation](#) | [Irrigation Schematic](#)

Water 2025: Preventing Crises and Conflict in the West

Water is the lifeblood of the American West and the foundation of its economy. It is also the scarcest resource in some of the fastest growing areas of the country

Water 2025 is intended to focus attention on the reality that explosive population growth in western urban areas, the emerging need for water for environmental and recreational uses, and the national importance of the domestic production of food and fiber from western farms and ranches is driving major conflicts between these competing uses of water.

In some areas of the West, existing water supplies are, or will be, inadequate to meet the demands for water for people, cities, farms, and the environment even under normal water supply conditions.

Water 2025 recognizes that states, tribes, and local governments should have a leading role in meeting these challenges, and that the Department of the Interior should focus its attention and resources on areas where scarce federal dollars can provide the greatest benefits to the West and the rest of the Nation.

• **Water 2025** provides the basis for a public discussion in advance of water crises and sets forth a framework to focus on meeting water supply challenges in the future. This framework includes:

- **Six Principles** to guide Interior in addressing water problems.
- **Five Realities** that drive water crises.
- **Four Key Tools** to help proactively manage scarce water resources.

• **Six Principles**

- Recognize and respect state, tribal, and federal water rights, contracts, and interstate compacts or decrees of the United States Supreme Court that allocate the right to use water.
- Maintain and modernize existing water facilities so they will continue to provide water and power.
- Enhance water conservation, use efficiency, and resource monitoring to allow existing water supplies to be used more effectively.
- Use collaborative approaches and market based transfers to minimize conflicts.
- Improve water treatment technology, such as desalination, to help increase water supply.
- Existing water supply infrastructure can provide additional benefits for existing and emerging needs for water.

• **Five Realities**

- Explosive population growth in areas of the West where water is already scarce.
- Water shortages occur frequently in the West.
- Over-allocated watersheds can cause crisis and conflict.
- Water facilities are aging.
- Crisis management is not effective in dealing with water conflicts.

• **Four Key Tools**

- Conservation, Efficiency, and Markets
- Collaboration
- Improved Technology
- Remove Institutional Barriers and Increase Interagency Cooperation

• **Water 2025 will:**

- Facilitate a more forward-looking focus on water-starved areas of the country;
- Help to stretch or increase water supplies to satisfy the demands of growing populations, protect environmental needs, and strengthen regional, tribal and local economies;
- Provide added environmental benefits to many watersheds, rivers, and streams;
- Minimize water crises in critical watersheds by improving the environment and addressing the effects of drought on important economies; and,
- Provide a balanced, practical approach to water management for the next century.

[Back to Water 2025 Presentation Page](#)



NEWS

U.S. Department of the Interior

OFFICE OF THE SECRETARY

For Immediate Release
May 2, 2003

Trudy Harlow 202-513-0574

Frank Quimby 202-208-7291

Water 2025: Preventing Crises and Conflict in the West

Interior Proposal Would Concentrate Federal
Resources to Support Community Solutions

(WASHINGTON)—Chronic water supply problems in the West are one of the greatest challenges facing the nation in the coming decades, Secretary Norton said today in announcing her proposal to help communities predicted to experience conflicts over water during the next 25 years even in the absence of drought.

The proposal—Water 2025: Preventing Crises and Conflict in the West --calls for concentrating existing federal financial and technical resources in key western watersheds and in critical research and development, such as water conservation and desalinization, that will help to predict, prevent, and alleviate water supply conflicts. The President's FY 2004 budget calls for an initial investment of \$11 million for such efforts.

"Crisis management is not an effective solution for addressing long-term, systematic water supply problems," said Norton, noting that crises in the Klamath River and Middle Rio Grande River basins—where farmers, urban residents, Native Americans, and fish and wildlife have been affected by water shortages—vividly demonstrate the consequences of failing to strategically address the problem of competing demands for a finite water supply.

"Water 2025 recognizes that states, tribes, and local governments should have a leading role in meeting these challenges," Norton said. "The Department of the Interior should focus its attention and resources on areas where scarce federal dollars can provide the greatest benefits to the West and the nation."

In some areas, the Secretary noted, there is not enough water to meet the existing needs of cities, farms, tribes, and the environment even under normal water conditions. And, the continuing drought magnifies already stressed water supply situations in important river basins.

Driving this new reality, she noted, are explosive population growth in western urban areas, the increasing need for water for environmental and recreational users, and the national importance of food and fiber production from Western farms and ranches.

The Water 2025 effort could help stretch existing water supplies by improving conservation, using more efficiencies, and better monitoring of water resources. Modernizing aging water supply structures—from dams

and reservoirs to pumping stations, pipelines, and canals can help stretch existing water supplies.

In some cases, collaborative approaches and market-based transfers can use water banks or other means to meet emerging needs. Federal investments in research and development can provide more affordable water treatment technologies, such as desalination, to increase water supplies in critical areas.

"Water 2025 provides a basis for a public discussion of the realities that face the West, so that decisions can be made at the appropriate level in advance of water supply crises," Norton explained. In working with western communities, Interior is guided by the principles of federalism and fiscal reality at both the federal and state levels.

"Water 2025 is a commitment by Interior to work with states, tribes, local governments, and the public to address water supply challenges in the West," Norton said. "These decisions cannot and should not be driven from a federal level. They should be based on-and will require-local and regional support."

A primary principle of Water 2025 is that solutions to complex water supply issues must recognize and respect state, tribal, and federal water rights, contracts, and interstate compacts and decrees of the United States Supreme Court that allocate the right to use water.

The Department is confident, Norton said, that these water supply challenges can and will be met in a manner that protects and enhances the economy and the environment of the West and the nation.

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Integrated Regional Water Management Planning Regional Issues

The Water Plan Update, Water 2025 and the Bay-Delta Program rely on local and regional cooperation and actions to carry out their respective processes. For the Bay-Delta Program, many of the projects and actions it funds or recognizes as furthering the goals of the Program are implemented by local and regional partners.

Provided below is a definition for Integrated Regional Water Management Planning and what we have heard regarding the challenges regions face when developing such plans.

1. What is Integrated Regional Water Management Planning in California?

The Integrated Regional Water Management Planning Act of 2002 (SB 1672, Costa and AB 2469, Dickerson) and Chapter 8 of Proposition 50 generally define an Integrated Regional Water Management Plan (IRWMP) as a plan that:

- a. Addresses the needs of several jurisdictions, agencies, or organizations in a geographic area.
- b. Integrates a variety of approaches to solve water management problems.
- c. Includes active public participation.
- d. Includes adequate science and technical review.
- e. Is integrated with smaller and larger scale planning efforts. On the local level, this can include watershed plans, water district plans, or other local plans.

Within these definitions, there is a lot of flexibility regarding which groups are involved, what the geographic scope is, which goals and objectives are addressed, how the plan is developed, and what it contains.

2. What are the challenges regions face when developing such plans?

The State and Federal agencies have heard, from interests throughout the Bay-Delta Program solution area, that some of the challenges are:

- a. State and federal funding for preparation of regional plans is very limited and some regional partners such as cities and counties are unable to participate without outside funding.
- b. Regional planning is complex, time-consuming, and rewards are sometimes not readily apparent or easily achieved.
- c. Many regions lack sufficient water infrastructure to benefit in the near-term from regional planning.
- d. Each agency has its own mandate, stakeholders, and planning processes.
- e. Regional processes take time and effort away from the local efforts.
- f. Efforts to coordinate and share information within a region and with State and Federal agencies may be resisted out of fear of losing control over individual responsibilities.

- g. There are already a number of regional and sub-regional planning efforts underway focused on specific goals or elements.
- h. Some groups may have trouble defining their regional boundaries. A planning area may be based on a watershed, hydrologic or groundwater basin, political boundaries, or a combination, depending on the needs of the participants.
- i. Data are currently collected by many different jurisdictions for different purposes; often, there is no easy way to assemble the data.
- j. While there are areas of overlapping interests, there are also areas where the interests of the various parties do not overlap or where they are contradictory.
- k. Funding for implementation is limited, and being part of a regional planning process does not reduce and may even intensify competitiveness within a region.

3. Given these challenges what are the benefits?

The State and Federal agencies have also heard that Integrated Resource Water Management Planning can:

- a. Provide for better coordination, collaboration, communication, and cooperation between regional partners.
- b. Provide a regional approach for coordinating agency efforts to fully promote and maximize their missions.
- c. Provide a living document that can aggressively be used to secure Federal and State funding for the region.
- d. Provide a regional approach for achieving water supply, water quality, ecosystem restoration and flood control goals important to the region.
- e. Provide a regional voice for otherwise separate agencies to improve policies, regulations, and laws that directly affect the IRWMP process and cooperating participants.

California Bay-Delta Public Advisory Committee

Meeting Date: 9/11/03
Agenda Item: 9

Finance Plan Status Update

Description:	Status report on long-term finance plan.
Recommended Action:	Committee discussion and comment.

Staff Recommendation

Staff recommends the California Bay-Delta Advisory Committee discuss and comment on the proposed strategy for developing a long-term finance plan. Committee review at this time provides comments early in the plan development process and keeps the Committee up-to-date on progress.

Background

A fundamental priority of the Bay-Delta Program is to maintain a balanced and integrated program. Funding availability over the first three years of the Program has caused delays and threatens the balance. Therefore, it is important to develop a long-term finance plan (finance plan) that enables the Program to continue implementation in a balanced manner.

Developing a finance plan for the Bay-Delta Program will be challenging because of the large scope of the Program, the complex interrelationships between the program elements, the lack of measurable benefits for many programs and projects, and the lack of cost estimates and project descriptions for certain projects.

The Bay-Delta Authority staff and consultants will prepare the following three reports as part of the process:

- **Framework and Issues Report** – Fall 2003. Proposes a framework and set of principles for developing the finance plan. Identifies the key finance issues and concerns for the Program as a whole and for each of the program elements.
- **Draft Finance Options Report** – Winter 2004. Using the framework and principles described in the Issues Report, develop finance options for each of the program elements based on an evaluation of benefits, beneficiaries, and costs.

- ***Final Finance Options Report*** – Spring 2004. Propose a final set of finance options, including the institutional structure to implement a finance plan.

Independent Review Panel. The BDA is convening an Independent Review Panel to review and comment on each of the above reports. The Panel will be asked to review and comment on the finance plan framework, principles, and options developed by BDA staff and consultants. The finance plan also will be developed with agency, stakeholder, public and legislative involvement.

BDA is recruiting up to 8 nationally and/or internationally recognized experts with a balance of academic and practical experience regarding public financing. Panelists will need to meet all or part of the following backgrounds, expertise and abilities:

- ◆ Academic and/or practical public finance experience
- ◆ Knowledge/experience with financing for large ecosystem and/or water management programs
- ◆ Knowledge/experience in federal and/or state financing policies, laws, fee revenue systems, or other funding structures
- ◆ Academic background in economics or public finance with knowledge of benefit and cost allocation processes related to water or other natural resources programs or projects
- ◆ Knowledge of western water and environmental resource issues, policies, or programs
- ◆ Ability to work collaboratively and think across disciplines
- ◆ Ability to weigh issues in a balanced, objective manner, as reflected in the perceived willingness/ ability to integrate across disciplines
- ◆ Availability throughout the duration of the appointment

Final panel selection will be made by the BDA, after it receives input from Committee members. The Panel is expected to be convened by November 2003, and serve a one-year term. Three panel meetings are planned, each to coincide with the three BDA reports. The first meeting will be in the fall of 2003 to review and comment on the Framework and Issues Report. The second and third meetings will be in winter and spring of 2004 to review and comment on the Finance Options Report. Panel meetings are expected to be open to the public.

Deliverables Period

The Independent Review Panel's final deliverable will be a final written report, which is to include a critique of the staff drafted options analysis for the finance plan. As feasible and appropriate, a final written report may also include specific Panel recommendations regarding a preferred approach for structuring and implementing a finance plan. The Authority intends to use the Panel's final report to inform its development of the finance plan for subsequent consideration by the appropriate advisory and decision-making authorities.

Stakeholder and Agency Involvement. To foster a process informed by agency and stakeholder views and perspectives, the Panel process will incorporate the continued input of diverse and informed stakeholders and state and federal agency representatives. These individuals are to participate in two different ways.

Technical Advisors: Technical representatives recommended by stakeholders and State and Federal agencies will be asked to support the Panel's deliberations by helping the panelists and the Authority to better understand issues under discussion. These technical advisors are expected to participate in Panel deliberations and provide input and guidance on the process and draft documents as well.

Ad Hoc Work Group: Policy-level representatives from interested stakeholder groups and State and Federal agencies will provide more policy-focused guidance to the Authority and Panel. These participants – to be invited to contribute to Panel deliberations and provide between-meeting guidance - are to serve as a sounding board regarding on-going Panel process and issues.

Committee Role

Involvement in the Bay-Delta Program finance plan is a Committee 2003 priority that was adopted at the meeting on March 23, 2003. The Committee expects to be kept up-to-date on progress and have the opportunity to review draft reports. Advice from the Committee to the Authority and implementing agencies may be based on recommendations or comments from the Steering Committee, other subcommittees and Authority staff.

California Bay-Delta Public Advisory Committee

Thursday, June 5, 2003

9:00 a.m. to 3:45 p.m.

California Bay-Delta Authority

Bay-Delta Room

650 Capitol Mall, Fifth Floor

Sacramento, California

Draft Meeting Summary

Members in attendance: Gary Bobker, Ryan Broddrick, Denny Bungarz, Christopher Cabaldon, Tom Clark, Marci Coglianese, Martha Davis, Greg Gartrell, Joseph Grindstaff, David Guy, Martha Guzman, Steve Hall, Jerry Meral, Barry Nelson, Mike Rippey, Frances Spivy-Weber, Maureen Stapleton, Marguerite Young, Tom Zuckerman

1. Opening Remarks/Introductions

Vice Chair Denny Bungarz opened the meeting and explained that Chair Gary Hunt was unavailable due to an illness in his family. Members and State and Federal agency representatives introduced themselves. Resources Secretary Mary Nichols announced that appointments to the California Bay-Delta Authority are pending. Designated Federal Officer Susan Ramos announced that the Department of Interior is hosting a meeting on July 10th on its Water 2025 report.

2. Staff Reports

Authority Director Patrick Wright provided recent Bay-Delta Program highlights including information contained in the Program's monthly electronic newsletter: updates on Federal authorization; a State budget update, including direction from Governor Gray Davis to propose a user fee for inclusion in the next State budget; and progress on the Bay-Delta Science Consortium. Member Greg Gartrell thanked agency representatives who are working with Contra Costa Water District on the Los Vaqueros Reservoir expansion project.

3. Subcommittee Reports

All reports were deferred to Agenda Item 5.

4. Coordination with California Bay-Delta Authority

Eugenia Laychak (Bay-Delta Authority) reviewed the items in the meeting packet and asked for comments. Member Frances Spivy-Weber asked that it be understood that the background statement for the balanced implementation committee priority refers to improving water quality, in addition to ensuring a reliable and sufficient water supply and restoring ecological health.

5. Bay-Delta Program Plan Review and Recommendations

Kate Hansel (Bay-Delta Authority) provided an overview of the process for developing and reviewing annual and multi-year program plans.

A. Drinking Water Quality - Karen Schwinn (U.S. Environmental Protection Agency) reviewed the Drinking Water Quality draft Program Plan, including the strategy and tools for improving water quality, cross-program integration, the role of the Science Program, policy development, and grant programs. Drinking Water Subcommittee co-chairs Greg Gartrell and Marguerite Young presented the subcommittee report on a draft Drinking Water Quality Policy Framework.

B. Delta Levee System Integrity – Steve Verigin (Department of Water Resources) reviewed the Levee System Integrity draft Program Plan, including the Plan objective, budget, schedule, status, Year 4 activities and issues. Delta Levee and Habitat Subcommittee co-chair Marci Coglianese noted interim progress made towards meeting levee improvement and Program funding goals established in the ROD, expressed subcommittee support for the Program Plan, and mentioned the subcommittee efforts on coordinating with other subcommittees.

D. (order of agenda items changed at meeting) Water Supply Reliability – Mr. Verigin continued his presentation by consolidating an overview of the Storage, Conveyance, Water Transfers, Water Use Efficiency, and Environmental Water Account draft Program Plans. He explained the strategy of implementing short lead time actions as quickly as possible and planning for longer-term projects for each of the elements.

Water Supply Subcommittee co-chair Steve Hall presented the subcommittee's recommendation which warns that funding shortfalls for surface storage feasibility studies may lead to an unbalanced Program, overall. The Committee was advised to address shortfalls or scheduled delays in one program element within the context of the entire Program. The Program was asked to include desalination in the Water Use Efficiency Year 4 evaluation and to include recycled water, desalination, and water transfers when comparing water management options. The Program was also asked to include urban certification program refinement in the multi-year program plan priorities.

Members discussed the need to review the efficacy of the EWA and that the subcommittees will determine their respective responsibilities for its oversight. Subcommittee co-chair Jerry Meral continued discussion on the future responsibilities for the Water Supply Subcommittee. It was suggested the subcommittee continue discussions on desalination and Upper San Joaquin River storage and improving integration of the water supply reliability elements.

Discussion also highlighted topics for future discussion at Committee meetings: environmental protections in the Bay-Delta Accord and how decisions and circumstances

since 1994 have or have the potential to change those protections, and coordination between the California Water Plan (Department of Water Resources Bulletin 160) update effort and the Bay-Delta Program, especially with respect to regional water supply reliability.

F. Environmental Justice – Environmental Justice Subcommittee co-chair Martha Guzman presented subcommittee recommended priorities for Year 4. She highlighted that the subcommittee is particularly interested in ensuring grants are accessible to economically disadvantaged communities and review of specific water transfers, ecosystem restoration, water quality, and storage projects.

C. Ecosystem Restoration and Watershed Management – Diana Jacobs (Department of Fish and Game) discussed the single blueprint for ecosystem restoration, new agency coordination efforts regarding watershed management and issues, including the need for performance measures to accurately determine progress towards improving the ecosystem and recovering species. Ecosystem Restoration Subcommittee co-chairs Gary Bobker and Ryan Broddrick summarized their recommendation which calls for identifying areas of synergies and conflicts and working with others on solutions, identifying long-term funding sources, including a user fee for ecosystem restoration, and consolidating permitting processes to facilitate implementation of projects. Watershed Subcommittee co-chair Martha Davis expressed her support for the new Watershed Council and asked that the Program account for losses of State general funds in the Watershed Program budget. Committee member Tom Clark and Director Wright called for a mid-stage 1 financial analysis that will be part of the Program's annual review.

E. Science Program – Zachary Hymanson (Bay-Delta Authority) reviewed the Science Program priorities, including communications, development of performance measures and addressing water management issues. It was noted the Levee System Integrity Program Plan should address scientific questions raised by the Levees and Habitat Subcommittee. Other discussion focused on the role of science and adaptive management in policy decision-making. It was noted that scientific information will be very important in future decisions on the Operations Criteria and Planning biological opinions, the South Delta Improvements Program, and EWA.

G. Working Landscapes - Subcommittee co-chair Ryan Broddrick summarized their recommendations that suggest approaches for addressing water quality, protection of wildlife and management of agricultural operations, and land. It was noted that supporting locally based actions was extremely important for success on the recommended goals.

Action

The Committee accepted for consideration the following subcommittee recommendations on the draft Year 4 through 7 Program Plans:

- 5B Delta Levees and Habitat Subcommittee recommendation on the Program Plan
- 5C Ecosystem Restoration Subcommittee report/comments on the Program Plan
- 5D Water Supply Subcommittee recommendation on surface storage funding shortfalls
- 5E Environmental Justice Subcommittee recommendation on priorities

5F Working Landscapes Subcommittee Work Plan

5G Working Landscapes Subcommittee recommendation on Framework for Project Development & Selection

6. Integrated Key Milestones Update and Discussion

Director Wright summarized progress in identifying projects included in the Integrated Key Milestones facilitated process. Mr. Hymanson reviewed the schedule for science review. Discussion among agency representatives and members highlighted the challenges in ensuring the appropriate projects are included in the process, ensuring appropriate private and public venues are used to forward discussion, make decisions, and ensure subcommittees are involved. Discussion raised the following questions for future consideration:

- What is the role of the subcommittees in the Integrated Water Project Operations forum process?
- How is adaptive management to be incorporated in regulatory decision-making?
- What projects should be included for discussion in the forum process?

7. Bay-Delta Program Executive Science Board Update

Mr. Hymanson reviewed the Science Board structure for the Bay-Delta Program and the charge for the Executive Science Board, as well as the qualifications for the Board members expected to be appointed in the next few months.

8. Colorado River Quantified Settlement Agreement and Related Actions Panel Discussion

Secretary Nichols, at the request of Chair Gary Hunt, pointed out that the purpose of this agenda item is to brief the Committee on the role of the QSA within overall California water planning and water policy and to keep the discussion at a policy level. Panel moderator Steve Hall introduced the panel and reiterated that the discussion is not to debate the merits of the QSA, but rather to discuss impacts on the Bay-Delta.

Panel member Ron Gastelum (General Manager, Metropolitan Water District) explained how MWD is managing its water demand and supply with conservation, recycling, desalination, water transfers and storage, within and outside MWD's boundaries. His conclusion was that MWD is working towards water supply reliability and the absence of the QSA will not significantly affect achievement of that goal.

Panel member Maureen Stapleton (General Manager, San Diego County Water District) noted that water planning assumes a full Colorado River Aqueduct, without the interim surplus guidelines in the QSA, Southern California will have a difficult time meeting water supply needs in times of drought; and that Southern California will rely more on water transfers from Northern California. The QSA includes long-term water supply programs, based on transfers and water conservation in Southern California, to improve water supply reliability.

Panel member David Guy (Executive Director, Northern California Water Agencies) explained four points: the need to fully utilize Colorado River water and keeping the Colorado River Aqueduct full; not redirecting impacts to Northern California; continuing to develop north/south relationships; and figuring out how urban and rural California are to work together.

Panel member Richard Katz (member, State Water Resources Control Board and advisor to Governor Gray Davis) emphasized solutions to limiting Colorado River use will come from water trading, conservation, storage, desalination, recycled water, and conjunctive use programs. He pointed out that it is better for California if the State determines beneficial use of water rather than having the answer come from the Federal government. He announced the Administration is committed to restoration of the Salton Sea and to funding the QSA from sources other than Chapter 8 of Proposition 50. He also noted that the QSA could provide a solution for Southern California water supplies for 45 to 105 years.

Discussion between panelists, Committee members, and agency representatives highlighted the significant differences between the QSA negotiating parties. Issues raised included delays in building permits in southern California due to uncertain water supplies; Southern California, through the Bulletin 160 process, will be working on a regional plan that will address the Southern California region as a whole and should emphasize local projects; and that California's credibility with the other Colorado River Basin states and the Federal government is reduced because the QSA has not been executed. Mr. Hall summed up discussion by observing that three elements are needed for a successful negotiation: 1) benefits for success and consequences for failure; 2) an environment for fostering trust between the parties; and 3) broad-based political support for the parties' concerns. He noted these elements are not apparent in the negotiations over the QSA.

9. Adjourn

Vice Chair Bungarz thanked the panelists and adjourned the meeting after Ms. Laychak reviewed potential items for the next Committee meeting in Sacramento on September 11, 2003:

- Follow-up on Year 4 through 7 Bay-Delta Program Plans
- Progress in 2003 on balanced implementation (Committee priority), including a budget overview
- California Water Plan Update (Department of Water Resources Bulletin 160) and the Bay-Delta Program

Subcommittee Meeting Summaries can be obtained from our website.

For further information, please visit our website at

<http://calwater.ca.gov>.

**Correspondence included in the BDPAC/packet is on
file at the CALFED office.**

**To obtain a copy of the Correspondence Section,
please call (916) 445-5511.**